

# Railway Age

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## In This Issue

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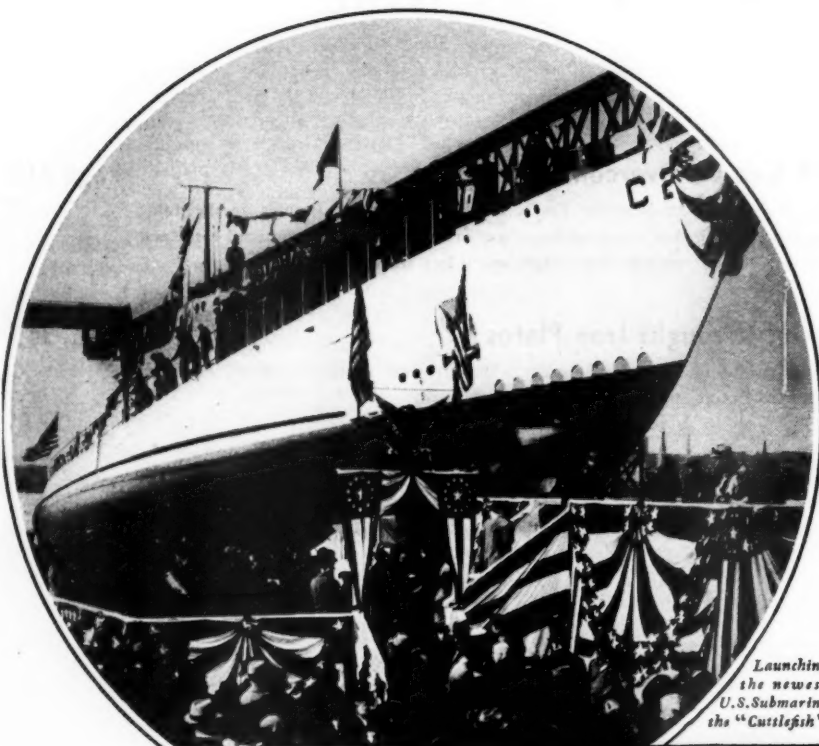
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# "Shall (Railroad) Careers Be Closed to Talent?"

"A picture of the railroads as institutions in which no one will be paid very much, but in which more people than necessary will be paid something—such a picture will not call young men of ambition and imagination into the railroad business." This statement appears in an article in the Atlantic Monthly for March entitled, "This Question of Salary: Shall Careers Be Closed To Talent?" The article discusses, among other things, the large reductions in the salaries of railroad officers, and especially of chairmen and presidents, caused by the government within the last two years. It is signed "Nickerson Southward," but the Atlantic states that this "is the pen name of a business man who has been engaged in competitive industry, both in manufacturing and in commerce, and has also had important connections in the utility field."

The author points out that the act which Co-ordinator of Transportation Eastman administers definitely restricts the reductions that may be made in the number of railway employees, but that the influence of the Co-ordinator and the Reconstruction Finance Corporation have been effectively used in behalf of general and drastic reductions in the salaries of officers. Furthermore, the influence of the government has been used, and is still being used, to maintain railway wages. The author says, "there is no question about the government's right" to regulate salaries, but points out that the few large salaries have been "the prizes for which, so far as money is concerned, the million men in the railroad industry strive," and questions whether it is wise to so regulate salaries as "to discount management and forego the stimulus of such salaries as the railroads have been accustomed to pay. \* \* \* It would seem that the problem is to provide more stimulus, in the long run, rather than less. When the reverse is true, the railroads cease to be a part of the land of opportunity. Young men of ambition, either those who seek money, or those who want the respect of their fellow citizens, will do better to apply elsewhere."

### Railroad and Other Compensation

Those who are familiar with railroad salaries, and who have read the information published in the news-

papers this week regarding the salaries and bonuses that have been paid to officers of corporations in other fields, most of which are much smaller and easier to manage successfully than large railroads, are likely to raise a question as to whether the railroads had not ceased to be "a part of the land of opportunity" long before the drastic reductions of railroad salaries that the government has caused during the depression. Apparently no bonuses have been paid to railroad officers, and, therefore, their salaries account for all the compensation received by them. In 1929 only three railway officers were receiving as much as \$150,000 a year, two were receiving \$125,000, eight \$100,000, one \$90,000, one \$85,000, one \$80,000, fourteen \$75,000, one \$70,000, one \$66,000, two \$65,000, three \$60,000 and thirteen \$50,000. These figures present a striking contrast to the amounts of compensation paid in salaries and bonuses to officers of other corporations.

The president of a large steel company received \$1,626,000 in salary and bonuses in 1929. The president of a large tobacco company received \$606,000 in 1929, over a million dollars in 1931 and \$826,000 in 1932. One tobacco company paying such large compensation not being sufficient to supply the demand for cigarettes, the president of another large tobacco company was paid \$271,000, and the president of a cigar chain store company \$232,000. That the American people have been willing to pay generously for movies as well as cigarettes, is shown by the following figures regarding the compensation received by the officers of a single moving picture producing company: president, \$890,000; first vice-president, \$890,000; general manager, \$710,000; vice-president, \$710,000. The president of another company operating a chain of movie houses received \$362,000.

The American passion for motoring is also strong, and the compensation of the chief executives of three automobile manufacturing companies, not including the largest companies, was \$388,000, \$225,000 and \$257,000, while the president of a company making automobile lights received \$338,000. The president of one chain store company received a salary of \$727,000, and the chairman of another \$267,000 and its president \$240,000. The president and a vice-president of a



soap manufacturing company were paid \$350,000 each. The president of one mail order house received \$431,000, and the chairman of another \$405,000 and its president \$250,000. These are but a few examples that might be cited. The head of any large corporation outside of the railroad field who did not receive more compensation than any railroad executive seems to have been a "piker." In fact, numerous vice-presidents of other corporations received much larger compensation than any railroad chairman or president and several times as much as that of any railroad vice-president.

### Are Incomes to Be Restricted?

Most railway salaries were reduced by the management before government influence was applied to them, and the pertinent questions regarding them are not whether, during the depression, they should have been reduced along with the incomes of other persons, but whether they should have been reduced as drastically as they have been, and whether, owing to the attitude of the government, it must be assumed that the day of large salaries in the railroad business is past. If this must be assumed, and such large salaries and incomes are going to be allowed to be made in future as heretofore in other lines of professional and business activity, it can be accepted as certain that young men of ambition and ability will in future avoid the railroad business. It is true, as Co-ordinator Eastman has said, that "money is by no means the only compensation received by a railroad executive," and that "the joy of creative work well done" is part of his compensation, but the same thing is true regarding compensation for almost any kind of professional or business work, and it will not be disputed by any person of broad observation and experience that the strongest motive of most men who engage in business and in the professions is the desire to make large incomes and accumulate wealth.

### What Will Government Policy Be?

But are restrictions upon incomes going to be applied to those made in the railroad business alone? Are they not going to be applied to incomes made in business and professional activities of all kinds? The government not long since distributed questionnaires from the answers to which were derived the information recently published regarding the salaries and bonuses paid by large corporations. It cannot be assumed that the purpose was to cause them to be advanced. Meantime, the government is trying to cause reductions in the hours of work and increases in the wages of wage earners. In spending the taxpayers' money through PWA and CWA it is following the policy of paying the "prevailing rate of wages," which results in many persons receiving more for unproductive "relief" work than they could get from private business in ordinary production and commerce.

What, then, is, and is going to be, the policy of the

government regarding incomes in general, including profits, salaries and wages? If anybody doubts that this question is pertinent and important at the present juncture in our national affairs, it is because he does not read what is being written by the real authors, exponents and advocates of the New Deal. They expressly avow that it is intended, not only to promote recovery, but to accomplish a great and permanent revolution in the distribution of the national income, not only by increasing small incomes, but by reducing large incomes. The reductions that have been made in railroad salaries are not only a part of this program, but they strikingly illustrate the fact that salaries, not only of \$100,000 a year, but much lower, are regarded by many New Dealers as affording excessive incomes. It should not be forgotten, as indicating the attitude of many men now influential in public affairs, that a bill which at one time stood a good chance of being passed by Congress, contained a provision that no company to which a loan was made by the Reconstruction Finance Corporation should pay any salary exceeding \$17,500 a year.

### Business Revival and Opportunity

Reports from Washington indicate that the administrators of the government's recovery policies are now extremely anxious to see a revival of initiative, enterprise and spending in private business in order to reduce the amount of government spending required to give employment. Undoubtedly one of the principal obstacles to the complete revival of private business which most persons desire, and which officials of the administration desire as much as anybody, is doubt in the minds of many business men, both capitalists and managers, as to whether the government's policies will allow them in future to reap where they sow.

The owner of capital would like to know whether, if he invests part of it in private business, as the Government now wants him to, he will have opportunity to get a return largely exceeding the interest upon government bonds. Otherwise, he will invest it all in government bonds. Investment bankers would like to know whether, if they market securities to the public, they will make profits by so doing, or suffer losses under the new securities act. The officers of corporations would like to know whether, if they lure investors into their companies, they will have opportunity to satisfy them by making money for them. Every ambitious official of a corporation would like to know whether, if he exerts himself to the utmost to increase the business and net earnings of his company, he will have opportunity to get an income proportionate to the creative work done by him.

### Some Examples of "Unselfishness and Public Spirit"

Now, of course, many persons regard men with capital who want to get profits, corporation management that desire to make profits for their investors, and professional and business men who desire to make



large fees or salaries, as selfish and lacking in public spirit. But is there any evidence that a self-sacrificing public spirit has become so prevalent recently among all members of American society, excepting capitalists and ambitious professional men and officers of companies, that these classes should alone be condemned as selfish if they still seek profits and unusually large salaries or other incomes? Are farmers seeking subsidies from the government entirely for the benefit of the public? Do wage earners want reductions of working hours and advances in wages solely because they believe they will promote the public welfare? Do officers of labor unions accept salaries greatly in excess of the wages of their members solely because they consider high salaries for labor leaders in the interest of wage earners and the public? Do politicians seek office, and try to retain it by maintaining or increasing government expenditures, solely because it is in the public interest that these particular politicians shall have government jobs?

Do politicians and labor leaders in many of our large cities join in rackets by which business and wage earners are exploited because they are convinced that such exploitation is in the public interest? Do politicians and leaders of veterans' organizations repeatedly renew efforts to raid the public treasury for larger bonuses for veterans, because they believe that, while the payment of the bonuses would be bad for the politicians and veterans, they would enhance the prosperity of the millions of taxpayers who would have to pay them? Finally, is it not barely possible that politicians, socialists, brain trusters and labor leaders who join in trying to curtail the profits and salaries derived from investment and professional and business work, are not inspired entirely by devotion to the public welfare, but in some measure by selfish ambition or by envy of those who show more ability than they do to get large incomes under conditions of competition? Selfishness does not seem to be confined to those who are unusually capable. The principal economic difference between them and other persons seems to be in energy and ability, not in honesty or selfishness.

#### Who Causes Economic Progress?

Nobody would undertake to make an argument against restrictions by government upon efforts to get income or wealth by dishonesty or other means that do not contribute toward increasing, or that actually tend to reduce, the national income or wealth. It would be difficult to defend on any ground, especially from the standpoint of stockholders, many of the salaries and bonuses paid during the period of prosperity in view of the fact that they were based upon the earnings made by the companies paying them when it was comparatively easy to make large earnings, and of the further fact that many of their recipients have demonstrated an astonishing lack of capacity for leadership in solving the difficult problems presented by the de-

pression to business in general and therefore to their own companies in particular.

But, however much too large may have been the compensation paid in many cases in proportion to the ability actually demonstrated under conditions of both prosperity and adversity, there can be no evading of the question as to the extent to which, if at all, public sentiment and the use of governmental power should artificially curtail the profits, salaries and other income of men of unusual ability, enterprise and energy, upon the assumption that the income and wealth of which they are thus deprived will be added to the income and wealth of the less able, enterprising and energetic.

There is no evidence in economic history that arbitrary curtailment of the economic opportunities of men of exceptional ability, enterprise and energy ever increased the incomes and wealth of the less able, enterprising and energetic. Progress in industry and commerce always has been principally due to the superior ability of a comparatively few men, but their work has increased the income of society as a whole, and most of the resulting increase in total income has been received and enjoyed by the many millions of persons who, without able leadership and direction, could never have had more than the bare necessities that they could have produced with their own hands.

#### Railroad Salaries and Railroad Progress

Reduce too much the number and size of the large prizes to be won, and you will inevitably reduce the intensity of the competitive efforts made by able men to win them and the productiveness of their work. The history of the unequalled economic development of the United States, in which the prizes offered to professional and business ability have been the largest, is the strongest possible evidence in support of the economic advantage to all classes of offering large prizes for economic achievement. The certain effect of government policies arbitrarily reducing and limiting the incomes of the more able, enterprising and energetic, for the purpose of increasing the incomes of the masses will be to hinder increase of the total national income, and, thereby, of the incomes of all.

Progress in the development of the railways to cheapen and improve their service to the public and to enable them to pay higher wages to their employees is still as possible and much needed as it ever was. In order that such progress may be continued, it is essential that the railways shall afford attractive investments to owners of private capital, and opportunities for men of ability and energy to make salaries commensurate with the compensation paid for equal ability and energy in other fields. The largest salaries heretofore paid by the railroads have been small as compared with the incomes that many men having less ability and responsibility than railroad executives have made in managing smaller businesses. "Shall (railroad) careers be closed to talent?" They will be if large railroad salaries are to be denied to talent; and

the economic progress of the entire nation will be hindered if there is adopted a government "planned economy" that includes drastically leveling down incomes larger than the average upon the assumption that this will level up incomes smaller than the average.

## Maintaining Standards of Comfort for Passengers

The standard of sleeping and parlor car service, since most such service is operated by one company, does not vary greatly from one railroad to another, but there is a striking difference to be noted in coach and dining car service as between some railroads—a difference which should prove most instructive if railroad officers in traveling upon lines other than their own would make it a point always to include such service, as well as that offered by the Pullman Company, in the range of their observations.

For example, on trains of similar importance on two roads not widely separated from each other recently, the greatest contrast was to be noted in accommodations provided for coach passengers. The cars in both instances were of all-steel construction, but on one road the seats were modern, clean and comfortable; on the other, quite the contrary. On one road the toilet accommodations were primitive and forbidding, with only cold water available and no provision of soap or towels. On the other the facilities were not greatly inferior to those offered in Pullman cars, with the single exception that the towels were of paper. On the one road paper drinking cups were available only from a penny vending machine; on the other they were free. On the one road the general air of discomfort was augmented by the constant hawking of a slovenly news "butcher"—absent on the other road, this service being provided only during stops at terminals.

The impracticability under present conditions of increasing operating expenses materially to improve the quality of passenger service, of course, must be recognized, but is it not possible that some roads could make considerable improvements with little added cost other than that necessary for more intensive supervision? The uniform quality of Pullman service, for which careful training and supervision of employees is so largely responsible, has already been referred to. Perhaps a railway competitor—an important air line—has also hit upon a plan that railways might investigate.

This is the provision of stewardesses on all passenger carrying planes. The young women so employed are attractive and, by reason of a requirement that they have training as nurses, are well able to deal with people and, also by reason of their training, are not above doing a little porter work now and then to keep the vehicles neat. They do not wait to be called upon, but offer their services to passengers and at all times endeavor to make them comfortable. It is improbable

that railway passenger earnings would justify any considerable added expense to provide such service on trains, but might not such duties be combined, perhaps, with those of news vendor in a manner to increase greatly the comfort of passengers without adding to the number of train staff? One railroad has employed women hostesses on some of its trains and, to judge from comments of passengers, the innovation has proved most popular.

Whether such employees are needed or not, however, the fact nevertheless remains that some railroads at least have probably reduced supervision below the point where a uniformly high quality of service can be assured and, as increasing revenues permit, this situation should be rectified. Indeed, it is not unlikely that more intensive supervision in many situations would quickly pay for itself by economies and opportunities for greater earnings which it would disclose.

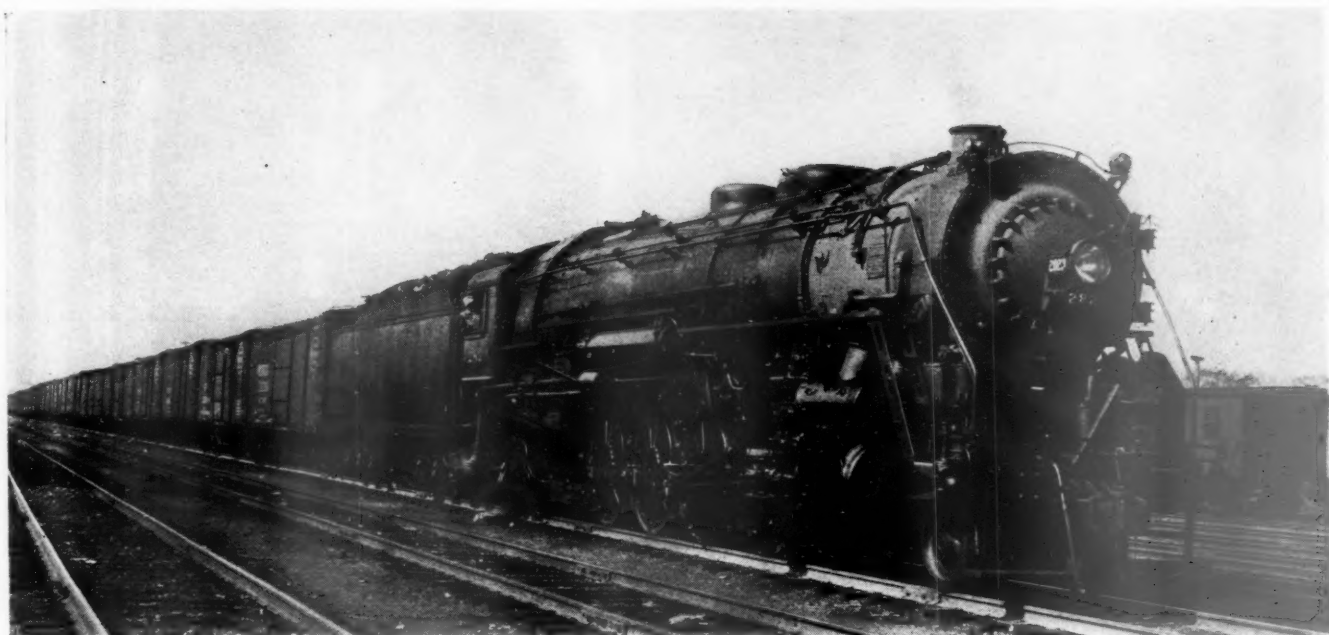
## The Traffic Development Series

With the article in this issue entitled "Competition Can Be Overcome!", the *Railway Age* brings to a conclusion the Traffic Development Series of 20 articles, which it has published in alternate issues since June 10, 1933, and in which many steps which can or should be taken by the railways to increase their freight and passenger traffic, especially in the face of outside competition, have been suggested, discussed and evaluated. The *Railway Age* hopes that, with its Traffic Development Series, it has made a contribution to the solution of what is currently the most pressing railway problem, the recovery of traffic and the restoration of passenger and freight revenues. It is encouraged to believe that it has done so because of the interest in the series in general and in various articles in particular which readers have expressed. Many orders for reprints of one or more of these articles have grown out of the series, and it is estimated that at least one of the articles has had a circulation among railway men in one form or another well in excess of 85,000.

While the Traffic Development Series itself has been concluded, the *Railway Age* will continue to publish articles on the subjects covered by the series. One of the distinct developments in recent years has been the increasing importance of railway traffic departments, a reflection of the growing recognition that the railways must sell their passenger and freight transportation service and not merely accept orders for it.

Inquiries have come from various sources as to the plans of the *Railway Age* for the reprinting under one cover of the entire series of 20 Traffic Development articles. This depends upon whether there is a demand for a reprint of this sort. If such a demand exists, the reprints can be made and distributed at relatively small cost. Readers who would like to have the Traffic Development Series in its entirety, bound within one cover, are invited to advise the editor to this effect.





High-Speed Freight Trains Are a Substantial Part of the Answer to Truck Competition

## Competition Can Be Overcome!

Improved passenger and freight service, adjusted rates and  
stronger selling methods will restore much lost  
traffic to railways

THE gradual recovery of general business is giving a long-needed stimulus to the railways' freight and passenger traffic and is adding welcome dollars to their revenues. Thanks to this general business recovery, the railways are beginning to emerge from the worst stages of the crisis which developed among them during the depression and are facing the future with increasing confidence in their ability to make their revenues match their expenses. Nevertheless, while the alarming situation in which the railways found themselves, because of dwindling traffic and revenues, is beginning to improve, it is not yet even substantially corrected, and there is reason to believe that something more than continued improvement in general business is necessary to accomplish this.

There still remains the question of competition for passenger and freight traffic and how it can be overcome. This competition, on the highways, on the waterways and in the air, is as strong as ever, constituting a serious threat to the future prosperity of the railways. It was this competition which, to a large degree, brought about a decline from \$1,148,000,000 to \$874,000,000 in railway passenger revenues between 1923 and 1929, years of great prosperity for the country as a whole. It was this competition, likewise, which cut the railways' l.c.l. freight tonnage from 44,339,000 tons in 1923 to 36,043,000 tons in 1929, and the same competition, it is not to be doubted, has been partly

responsible for the extremely low levels of railway freight and passenger traffic since 1929.

Recovery in general business may ease the greatest strain upon the railways, terminating the recurring deficits which have marked their operations during the last few years. But traffic recovery and traffic development are just as essential to the railways now, when more of them are enjoying some sort of net income, as they were a year or so ago when deficits were the rule. Recovery in general business unquestionably will enable the railways to make both ends meet, regardless of competition, but only by overcoming that competition and recovering the large volume of traffic which it has taken from the railways can they hope to enjoy real prosperity. The traffic which the railways have lost to their competitors cannot be defined accurately in terms of revenues, but estimates which have been made indicate that it is causing revenue losses by the railways of somewhere between \$500,000,000 and \$1,000,000,000 per year. To say that the railways need this revenue and the passenger and freight traffic which it represents is to state an obvious fact.

The question then arises, Can the railways overcome competition? Is it within their power to match or exceed the speed, flexibility and economy of truck transportation; the speed, comfort and convenience of automobile travel; the convenience and economy of bus transportation; the cheapness of subsidized waterway





Modern, Completely Air-Conditioned Passenger Trains, Such as the Chesapeake & Ohio's "George Washington," Will Help Restore the Habit of Travel by Rail

competition; and the extreme speed of air transportation? Shippers and travelers have come to place a high value upon these attractions in the kind of transportation offered by railway competitors. As indicated above, it is a value somewhere between \$500,000,000 and \$1,000,000,000 a year. Is it within the power of the railways to put themselves on an equal footing with their competitors, service for service and cost for cost, or even put themselves on a superior level, so that the value which travelers and shippers place upon economy, speed, flexibility, convenience and comfort will represent revenues for the railways rather than for railway competitors?

#### Answer Lies in Railway Experience

To answer this question, the railways have only to look at their own experience. They have proved again and again that competition is not infallible, that it is within the railways' power to meet the modern needs of shippers and travelers and to win their patronage despite

competition. In other words, the railways have already demonstrated that competition can be overcome, and the fact that it has not been overcome to an extent greater than that which already prevails is due to the inability or disinclination of the railways to do at one time all of the things necessary to bring about traffic recovery.

Since last June, the *Railway Age* has published 19 articles which have discussed and evaluated ways in which the railways can make successful efforts toward traffic recovery. These have discussed ways in which the railways have successfully improved their service, successfully re-priced it and successfully changed their selling methods. It has been shown how, in specific instances, rate reductions, the air conditioning of passenger trains, the modernization of passenger equipment, the speeding up of passenger service, the coordination of motor coach and passenger train service, the proper capitalization of the advantage which the railways possess in their Pullman service, the intelligent

(Continued on page 318)

#### Preceding Articles in the Traffic Development Series

Traffic Recovery—The Railways' Greatest Problem.....	June 10, 1933
Will Reductions in Rates Attract More Passenger Traffic?.....	June 24, 1933
What Results from Fare Reductions?.....	July 8, 1933
Will Air Conditioning Attract More Passengers?.....	July 22, 1933
Is Modern Equipment the Answer?.....	August 5, 1933
Is Speed What the Public Wants?.....	August 19, 1933
Is the Motor Coach a Rail-Traffic Builder?.....	September 2, 1933
Are the Railways Capitalizing on Pullman Service?.....	September 16, 1933
Is Railway Passenger Service Properly Sold?.....	September 30, 1933
What Can Advertising Do to Promote Passenger Business?.....	October 14, 1933
Is There a Demand for Storedoor Service?.....	November 4, 1933
What Results from Storedoor Service?.....	November 11, 1933
What Is the Place of the Freight Container?.....	November 25, 1933
Are Smaller Freight Cars Needed?.....	December 9, 1933
Is Speed What Shippers Want?.....	December 23, 1933
What Results from High-Speed Freight Service?.....	January 6, 1934
Is It Hard for Shippers to Use Railway Service?.....	January 20, 1934
Can the Railways Improve Their Freight Solicitation Methods?.....	February 3, 1934
Should Railway Freight Service Be Advertised?.....	February 17, 1934



View of the Construction Activities on the Bridge During the Placing of the Wrought Iron Floor Plates

# Bridge Deck of Wrought Iron Plates

Special design provides shallow ballasted floor for Missouri Pacific underpass at Little Rock, Ark.

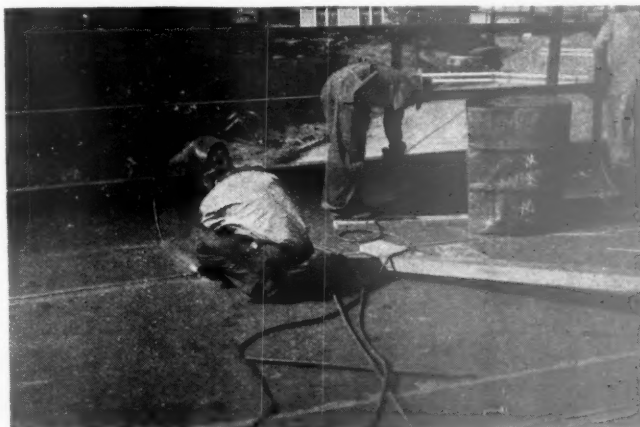
**W**IDE-flange beams covered with a  $\frac{5}{8}$ -in. wrought iron deck provided the answer to the problem imposed in the replacement of a pile trestle that carried the tracks of the Missouri Pacific over East Sixth street at Little Rock, Ark. Because the headroom required to accommodate electric cars operating in the street, and because the presence of sanitary and storm sewers precluded the lowering of the street grade and the situation with respect to the tracks made a raise of grade of more than 18 in. prohibitive, it was necessary to design a bridge floor of minimum depth while retaining, if possible, the advantages inherent in a ballasted deck. Studies demonstrated that steel beams, covered with a metal plate to support the ballast would provide the shallowest construction for the roadway span, 30 ft. 1 in. between curb lines, and genuine wrought iron was chosen as the most desirable material for the deck because of its resistance to corrosion. Notable among other interesting features of this structure is the use of 24-in. precast reinforced concrete foundation piles under the footings of the abutments.

The bridge is located at the throat of a yard, and carries four tracks and portions of five turnouts, and even with the type of construction adopted the run-off grades of those tracks other than the main track range from 0.8 per cent to 3.5 per cent. The grade of the main track across the bridge is 0.7 per cent. In plan, the structure is somewhat irregular, being slightly skewed with reference to the tangent of the main track, and 47 ft. 9 in. wide at one end, parallel with the center line of the street, and 60 ft. 9 in. wide at the other. It is a three-span structure, with bents at the curb lines and provides for a 30-ft. 1-in. roadway and two 9-ft. sidewalks.

Only the roadway is spanned by the steel beam construction, each of the sidewalk spans being incorporated in a reinforced concrete rigid-frame box that embraces the rear wall, the curb bent and bottom and top slabs. Thus these boxes perform the combined function of resisting the lateral earth pressure of the embankment, carrying the track load over the sidewalks and sup-

porting the ends of the roadway span over the curb bents. This arrangement was made possible by decreasing the headroom over the sidewalks so that the top of the slab over the walks is at a level with the bottom of the roadway span. Each abutment is supported by two lines of precast 24-in. reinforced concrete piles, one under the curb bent and the other under the rear wall. These piles are not required to resist the thrust of the lateral earth pressure, as provision for this has been made by introducing three reinforced concrete struts extending across the roadway between the faces of the footings of the two box abutments below the street level. The abutments are flanked by wing walls of concrete cribbing while side walls 4 ft.  $\frac{1}{2}$  in. high and a back wall extending 2 ft.  $7\frac{7}{8}$  in. above the top of the slab hold the back-fill and ballast in place over the abutments.

The main span of the structure is designed for Coopers E70 loading on all tracks, except that restrictions on train speeds led to a reduction of the impact to 50 per cent of specification load on that part of the structures carrying the main track and to 25 per cent on the



Showing the Shape, and Manner of Welding, the Curved Wrought Iron Floor Plates Along the Sides of the Bridge







# Truck Eliminates Harmonic Spring Oscillations

Spring-loaded wedges in the columns also increase effective spring capacity

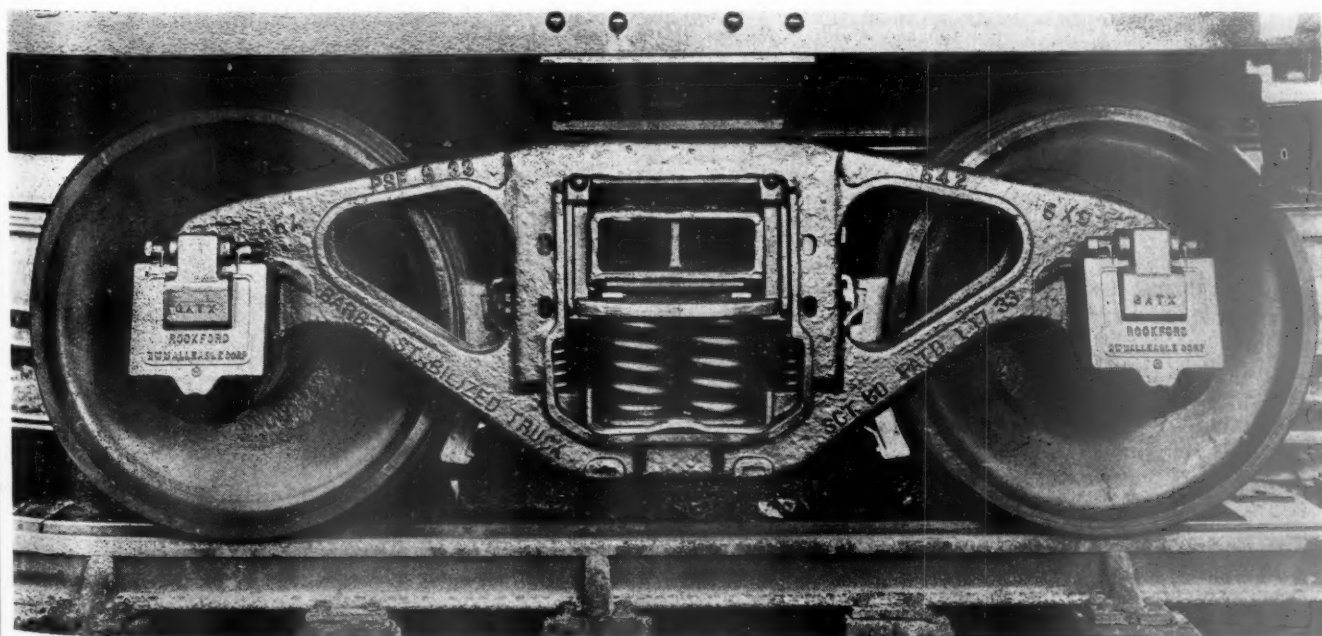
**A**FTER two and a half years of laboratory experiments and road tests the Standard Car Truck Company, Chicago, has developed a new freight-car truck which, in addition to other important features, is designed to solve the problem of excessive vertical oscillation of car bodies at critical speeds, thus minimizing damage claims, reducing car maintenance costs and providing increased safety at modern high operating speeds. The truck known as the Barber stabilized truck, is designed for use (either with or without the Barber lateral-motion device) on cars of all capacities. It comprises essentially conventional construction, except for the provision of friction elements under spring tension in the side-frame columns to dampen the up-and-down movement of the spring-supported bolster, this dampening effect being in proportion to the car load and tending to assure easy riding at all speeds, also, in effect, providing increased spring capacity when most needed.

The new Barber stabilized truck has been tested under the drop hammer at the American Railway Association draft-gear laboratory, Purdue university, and in the A. R. A. road service tests recently conducted at Rochester, N. Y. Additional road tests have been made with the stabilized truck under Santa Fe and Swift Refrigerator Lines' cars, two of these test installations having been in service for a period of over 13 months. Advantages said to have been demonstrated in tests of the new truck design include: (1) Effective dampening of vertical oscillation due to harmonic spring action; (2) increased spring-carrying capacity from 12 to 15 per cent without the use of additional springs; (3) elimination of all wear between the bolsters and columns be-

cause these members do not contact; (4) provision for vertical friction members which are self-cleaning and enclosed in columns where they are, to some extent, protected; (5) reduction of car roll to a minimum because of the dampening of spring action; (6) tendency to eliminate broken truck springs, due to the reduction of excessive vertical oscillation; (7) practical elimination of lost motion or looseness in the truck, since the small amount of wear anticipated on the friction blocks is automatically taken up as it develops.

The stabilized truck utilizes side frames furnished by any of the side-frame manufacturers, who may be licensed to arrange for the slight change necessary in the column design. Standard A. R. A. bolsters are used, except with the Barber lateral motion application, when a slight change in the bolster is required. The coil springs also are of standard A. R. A. design, the four large outer coils being located as usual under the bolster ends and two small inner coils being transferred from their usual location to the side-frame columns where they provide necessary tension on the tapered friction elements.

In the construction of the Barber stabilized truck for a 40-ton car, including the application of the lateral-motion device, a yoke, consisting of a horizontal cast-steel top compression bar and two cast-steel side members, is located around the bolster end. The lower edges of the side members are flanged to engage the underside of the lateral-motion roller plate. Wedge members, also of cast steel, make contact on a plane of 60 deg. with chrome-nickel friction blocks producing a frictional resistance against hardened wear plates which



Barber Stabilized Truck Designed to Eliminate Excessive Vertical Oscillation at Critical Speeds

are secured to the columns of the side frames by suitable countersunk head bolts and lock nuts. It is the friction produced at this point which breaks up the destructive harmonic action of the truck springs, permitting enough movement to give an exceptionally easy riding car, whether empty or under full load.

Another important factor in the design is that the outer faces of the vertical members of the yoke are provided with a convex surface, or rocker face, to compensate for irregularities in the manufacture of the side frame. This assures full and uniform bearing of the friction block against the wear plate.

The use of the Barber lateral-motion device is recommended, but, should this feature not be desired, the Standard Car Truck Company has provided for a design which will not incorporate this feature. In that case, the yoke is simply eliminated and the standard A. R. A. truck bolster inserted. The cast-steel wedge blocks are provided with lugs on the lower edges to engage the truck bolster, instead of the roller plate as in the initial design.

The standard A. R. A. Class C springs, with 40-ton capacity per car, have a solid capacity rating of 57,000 lb., of which the two inner coils produce 7,000 lb., or 12.28 per cent of the group. The Barber wedges, which are of cast steel, are designed with a 60-deg. angle; therefore, the horizontal component pressing against each side of the yoke or bolster is about 6,060 lb. at solid capacity. The friction blocks have a chrome nickel content with a bearing surface chilled and ground and a contact area of 76 sq. in. per side frame. This produces a pressure of about 160 lb. per sq. in. at full or solid capacity, but, under normal full loads, this pressure will not exceed 50 per cent, or 80 lbs. per sq. in. This low unit pressure tends to promote long service life.

Under drop test in the Purdue laboratory using the 27,000-lb. tup, the free oscillations of this Class C spring group, 15 in number, were reduced to three, with the Barber stabilized device. The Purdue tests also indicated that by reason of the frictional "build up," the foot-pounds of energy absorbed in producing a full spring closure of  $1\frac{1}{16}$  in. were increased from 4,050 to 4,610, an increase of 13.8 per cent in actual capacity of the spring group. This was in addition to absorbing the harmonic timing or bouncing and tends to prevent the springs going solid. The limited action of the springs also is expected to prevent the repeated development of excessive stress which is a prolific cause of fatigue failures and spring breakage.

## Competition Can Be Overcome!

(Continued from page 314)

selling of passenger transportation, and the shrewd use of advertising have overcome competition and recovered or developed passenger traffic for the railways. It has been shown how, in specific instances, the provision of store-door collection and delivery for l.c.l. freight, the use of freight containers and of smaller freight cars, the speeding up of freight train service to provide overnight deliveries between fairly distant shipping and receiving points, the relaxation of rules and regulations to make it easier for shippers to use railway service, the improvement of freight traffic solicitation methods and the use again of advertising have overcome competition and have recovered or developed additional freight traffic for the railways.

A strong case has been made for such changes in the way the railways provide, price and go about the selling

of their freight and passenger transportation. Evidence has been presented to prove that along these specific lines lie the means by which the railways will restore to themselves freight and passenger traffic which they have lost to competitors and which they badly need, and by which the railways will develop new traffic for themselves.

### No Single Step to Traffic Recovery

Study of the ways in which the railways can recover and develop additional traffic shows that one fact, however, stands out above all others. That is the fact that traffic recovery and traffic development cannot be reached by a single step. It is not enough to reduce passenger fares while leaving railway passenger service unchanged. It is not enough to apply air conditioning to passenger equipment while leaving rates and other aspects of passenger service as they long have been. It is not enough simply to speed up passenger trains, merely to improve solicitation methods or to launch impressive advertising campaigns, without making other revisions in the nature and cost of railway passenger service more nearly to make it meet the modern needs of travelers.

It is not enough to offer store-door collection and delivery service for l.c.l. freight without extending the range of overnight freight deliveries and putting applicable rates on a competitive basis. Conversely, it is not enough to speed up freight service without offering the faster handling at originating and destination terminals represented by railway-provided collection and delivery service. It is not enough to use containers alone, to improve freight traffic solicitation methods alone, to use advertising alone. Complete success in traffic recovery and traffic development will come only when all of these steps in making railway transportation more attractive have been taken in combination.

### Well-Rounded Program Needed

The traffic recovery and the traffic development which the railways so badly need, therefore, are not simple things. They will not result merely from the application to railway competitors of the sort of regulation to which the railways are subjected. It is at least extremely doubtful that the problem of how to increase railway traffic would be entirely solved if railway competitors were to have taken from them the subsidies which they now enjoy and were to be taxed for governmental purposes proportionately as heavily as the railways are taxed. It is obvious, from past experience, that this problem will not be solved by the adoption of isolated expedients.

Railway traffic recovery and traffic development depend upon the adoption by the railways of a complete program of service improvement, rate adjustment and the use of better selling methods. By the adoption of such a program, the railways, on the basis of their own experience, cannot only hope but can justifiably be confident that they will win back and add to the traffic which their competitors have taken from them. The program is an impressive one. It will be carried out only after the expenditure of substantial sums of money. It will call upon all the resource and ingenuity which railway officers can muster. But the end justifies the means. The hundreds of millions of dollars in passenger and freight revenues which railway competitors now have and which the railways badly need are worth the expenditure of time and money necessary to their recovery by the railways.

Competition can be overcome. The solution of the problem of traffic recovery and traffic development lies in the railways' own hands.

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# Key to Recovery Lies in Field of Durable Goods\*

By George H. Houston

President, Baldwin Locomotive Works, and Vice-President, National Association of Manufacturers

THE prime objective of the national industrial recovery act is to restore normal employment in private enterprise outside of agriculture, railroad transportation and certain other specialized fields. This meeting has been called to measure progress and to consider ways and means for further improvement. Certain difficulties are being encountered which require our earnest attention if we are to gain our full objective.

Colonel Leonard P. Ayres of Cleveland has graphically pointed out that gainful employment in this country naturally falls into two great groups. The first group consists of those who provide services and the second, of those who produce goods. Of the 49 million persons normally gainfully employed in this country as shown by the Census of 1930, about 23 million are engaged in the rendering of services, and about 26 million in the production of goods. Of the latter group about 10½ million are engaged in agriculture, about 5½ million in the production of other ephemeral consumption goods and about 10 million in the production of durable goods. Colonel Ayres has estimated that unemployment in the service group amounted in March, 1933, to about 5.9 million persons or 26 per cent of the employable personnel in that field and in December to about 3.8 million persons or 17 per cent of the employable personnel. In considering unemployment in the production of goods it should be realized that at no time has there been any substantial unemployment in agriculture. In the field of other ephemeral consumption goods the unemployment in March was about 1½ million persons or 27 per cent of the employable personnel in that group, and in December about 1 million persons or about 18 per cent of the employable personnel. In the durable goods field, unemployment in March was about 6.4 million persons or 64 per cent of the employable personnel and in December about 5.1 million persons or 51 per cent of the employable personnel. It will be seen from these figures that unemployment has been reduced from a total of about 13.8 million persons or 28 per cent of the total employable personnel in March, 1933, to about 9.9 million persons or 20 per cent of the total employable personnel in December.

About 3.9 million persons have been reemployed, exclusive of those employed through direct relief. A very large number are still without work, these being concentrated principally in the field of durable goods and in the provision of services. In the 15 groups for which the Bureau of Labor Statistics reports, the average work week has been shortened from 43.1 hours in July, 1933, to 37 hours in January, 1934, a decrease of 14 per cent. Public works financed by government funds has accounted for an increase in employment of about 265,000 persons.

Colonel Ayres has further pointed out that unemployment among those who render services is caused largely by unemployment among the producers of goods, fewer workers being needed in transportation, communication,

the professions, trade, banking and general office work, as well as in the personal and domestic service fields because of the great reduction in output of goods. It is apparent that at no time has there been any great degree of unemployment in the production of consumption goods and that there is relatively little opportunity for further increase of employment in this field except by further sharing of the work, a condition which cannot be corrected until those presently unemployed in other fields find work and income. The key to the present unemployment situation lies in the field of durable goods, the output of which must be restored before there can be much further recovery of employment in the provision of services.

The causes of the existing concentration of unemployment in the field of durable goods and its far reaching effect upon our industrial life will be found in a consideration of the nature of ephemeral consumption goods and of durable goods. Such consumption goods may be said to be those goods which are consumed currently in the processes of living while durable goods may be defined as the goods used in the permanent facilities for living and in the carrying on of the work of the country. The most notable characteristic of such goods is that they are not destroyed by use, but only by wear, obsolescence or accident. This relative permanence makes such goods available as collateral for credit for their procurement, a characteristic which continues during the period of their use. This availability as collateral is taken advantage of almost universally in the acquisition of such goods so that a second characteristic may be said to be that they are acquired with credit and paid for with savings.

A third characteristic is the elasticity in the demand for such goods, which is of interest when compared with the inelasticity in the demand for ephemeral consumption goods. In the presence of great popular confidence in the economic future and with an available supply of credit at reasonable cost, if durable goods can be obtained at reasonable prices, there is always a rapid expansion in the demand for them, not only for productive purposes, but for the procurement of the comforts and luxuries of life. In general during the optimistic period of an upward turn in the economic cycle durable goods are developed more rapidly than savings are accumulated, through the incurrment of debt with a corresponding expansion of credit, while during the pessimistic downturn of an economic cycle durable goods are produced at a lesser rate than savings are accumulated resulting in payment of debt and a contraction of credit. This cycle of events applies almost exclusively to the production of durable goods and is not found to anything like the same degree in the field of ephemeral consumption goods. It is this ability to expedite or postpone the demand for durable goods that constitutes the greatest single cause of fluctuations in employment. Until this postponement can be ended there cannot be much further recovery in employment.

The shortening of the work week so as to increase the

\* From address before the general session of the N. R. A. Conference, February 27, 1934, at Washington, D. C.



number of persons employed has been accompanied by an increase in the wage rates paid per hour, in an endeavor to pay everyone more or less the same wage for the shorter work period on the theory that the increase in the buying power of the wage earner thus created would bring about a corresponding increase in the demand for the goods produced. The application of this policy has brought about an increase in the average wage rates in the 15 industrial groups covered by the statistics of the Department of Labor from 43.8 cents per hour in July, 1933, to 53.9 cents per hour in January, or 23 per cent. This represents an increase in the cost of goods produced and ultimately a corresponding increase in the price at which such goods must be sold.

Whether an increase in the demand for consumption goods can thus be created is subject to debate, with a great deal to be said on each side of the question. Experience has shown generally that production costs and therefore prices rise as rapidly if not more so than wages and that no great retardation in the rise of prices is practicable. Also this theory ignores the very large aggregate of buying power for consumption goods existing outside of wages, which is directly reduced by such advancing costs and prices. There can be no question, however, but what this procedure will seriously curtail the demand for durable goods with a corresponding retardation of employment. Such goods are not paid for to any large extent directly with the proceeds of wages, but are financed out of reserves of existing savings or by drafts upon the credit resources of the country in anticipation of future savings. Employment in durable goods is a medium by which the buying power of the present may be directly increased by borrowing from the future in such a way that the debt created is serviced largely from the earning power of the facilities thus created.

Practically all industries in the durable goods field have been codified on the basis of a 36 or 40 hour maximum period of employment per week. Considerable pressure is now being applied to further shorten this work week to 30 or 32 hours with the present weekly wage for the shorter work period. This cannot be accomplished without so increasing costs and prices as to reduce further the already seriously curtailed demand for durable goods and freeze unemployment now existing in this field for the indefinite future. Flexibility in hours of work as is possible under the codes is essential to successful operation of industry.

In addition, general recovery in employment is impossible so long as each portion of the population is incompetent to buy its relative proportion of the aggregate products of all portions. One of the serious consequences growing out of the great reduction in commodity prices which occurred in recent years has been the disparity in this price reduction; agricultural products and raw materials have been reduced in substantially greater amount than manufactured products and manufactured consumption goods have been reduced more than durable goods. This disparity requires a correction before a free flow of goods can be re-established. The shortening of the work period in the manufacturing industries with a corresponding increase in the labor costs, and therefore in the sales prices required, further tends to emphasize this disparity.

It may well be that a more desirable solution to the social problem arising from present unemployment until private enterprise can be revived would be a continuation of direct relief through properly organized government agencies. The present depression is an economic disaster that affects the entire population, and not merely industry. Unemployment is not due solely to industrial causes, but largely to causes lying outside of the field of

production and distribution. While these causes are being corrected, industry must not be burdened with the emergency relief of unemployment in such a manner as to preclude the possibility of its recovery.

In general the world's inventory of durable goods must be replaced about once in every 20 years. Many thoughtful people are of the opinion that the country is completely built and that nothing further will ever have to be done to it in the way of physical facilities—that it is a finished job. As a matter of fact, so long as our physical sciences and mechanical arts continue to develop—so long as man has new ideas and new wants, so long will we have to continue to build and rebuild the durable equipment of the country.

The volume of accumulated savings seeking investment has been and will continue to be an important indicator by which the progress of the country in the accumulation of durable goods will be determined. The replacement of obsolete facilities and the opening up of new ventures will be undertaken by private enterprise, however, only in anticipation of a profit. These conditions require adequate long term credit or permanent capital at reasonable cost together with conditions favorable to forward planning and new enterprise. Capital invested in durable goods is not permanent but is being depreciated constantly and finally is dissipated completely. Such goods not only wear out, but are being destroyed by accident and rendered obsolete by technical developments on every hand. Thus, there is need for a continuous input of new capital to finance new facilities and replacement of old. In turn a continuous policy of saving is necessary to supply this capital. There can be no extensive recovery in durable goods without an accompanying activity in the creation and distribution of new securities. Statistics published by the Commercial Chronicle indicate that during the 10 months ended October 31 of last year new domestic corporate security issues exclusive of refundings amounted to only 138 million dollars, as compared with 4,521 million dollars average for the same 10 months for the years 1926 through 1930, or a reduction of 97 per cent. This practical cessation in the supply of capital to private enterprise is peculiar to America and does not exist in an acute condition abroad as is indicated by the corresponding figures for the United Kingdom, which issued during the same period in 1933 new domestic corporate securities, exclusive of refundings and issues for the Dominion and foreign corporations, in the amount of 78 million pounds sterling as compared with 137 million pounds sterling average for the same ten months of the same prior years, or a reduction of only 43 per cent. The present relative volume of capital flow into private enterprise thus disclosed of only 3 per cent of normal in America as compared with 57 per cent in the United Kingdom is an indication of the extent of the stagnation now existing in America in the flow of private capital into private enterprise.

Since the organization of the Reconstruction Finance Corporation and more particularly since the passage of the National Industrial Recovery Act, the federal government has given a great deal of thought to ways and means of supplying through government channels, the funds needed to make up a portion at least of this reduction in the flow of private capital into private enterprise. Banks cannot accomplish this objective as bank deposits are not available to any great extent for permanent or long term financing of this character. What is needed are capital funds, not short term, self-liquidating loans of the type permissible for bank deposits. The anomalous situation exists, however, that while the government is endeavoring to find ways and means of artificially supplying industry with its capital require-

ments it is at the same time throttling the flow of private capital into industry through drastic legislation of a regulatory nature such as the securities act of 1933 and the proposed national securities exchange act of 1934. Private enterprise cannot live in the face of these handicaps.

Unless we are prepared to abandon capitalism and adopt a social order in which the facilities of production and distribution are owned or controlled and incidentally financed by the state, the accumulation of savings and their flow into investment in durable goods must be continued. This can be accomplished, however, only in the face of conditions that will give reasonable expectation of security of principal and such rate of return as will encourage men to take the hazard of investment.

The government is now engaged, through public works and through the financing of the purchase of certain types of equipment, in what has been frequently called a priming of the economic pump in the hope that private enterprise will shortly take up and carry on the burden of restoring employment through the promotion of new undertakings and the rehabilitation of existing facilities. This renewed activity on the part of private enterprise is possible, however, only to the extent that it is furnished with an adequate supply of capital at reasonable cost, which in turn is possible only when such capital is reasonably assured of safety from the extraordinary hazards now confronting it and when savings are not being absorbed currently by a too rapid expansion of government debt. This priming operation will be efficacious only to the extent that the economic pump is actually in operating condition. If it is out of order no amount of priming will avail. Our first concern must be to put it in repair—that is to restore those conditions which will cause the owners of capital to again risk it in private enterprise, and private enterprise to again undertake new ventures.

## Freight Car Loading

WASHINGTON, D. C.

**R**EVENUE freight car loading in the week ended February 17 amounted to 598,896 cars, an increase of 26,392 cars as compared with the week before, 81,367 cars more than the figure for the corresponding week of last year and 26,392 cars above the 1932 total.

All commodity classifications showed increases not only as compared with the week before but also as compared with last year, except grain and grain products, which showed a small reduction as compared with the preceding week. The summary, as compiled by the Car Service Division, American Railway Association, follows:

### Revenue Freight Car Loading

Week ended Saturday, February 17, 1934

Districts	1934	1933	1932
Eastern	144,700	120,461	132,223
Allegheny	118,520	94,809	113,811
Poconong	44,566	41,254	36,021
Southern	92,626	80,420	84,647
Northwestern	67,117	60,250	66,461
Central Western	83,251	76,504	91,510
Southwestern	48,116	43,831	47,592
Total Western Districts	198,484	180,585	205,563
Total All Roads	598,896	517,529	572,265
Commodities			
Grain and Grain Products	30,285	26,129	40,927
Live Stock	16,467	15,509	18,935
Coal	148,263	139,163	112,064
Coke	11,108	7,244	6,191
Forest Products	23,014	14,134	19,342
Ore	4,177	2,228	3,139
Misc. L. C. L.	160,728	158,811	183,577
February 17	598,896	517,529	572,265
February 10	572,504	504,663	561,535
February 3	564,098	486,059	573,923
January 27	561,566	475,292	560,343
January 20	560,430	499,554	562,101

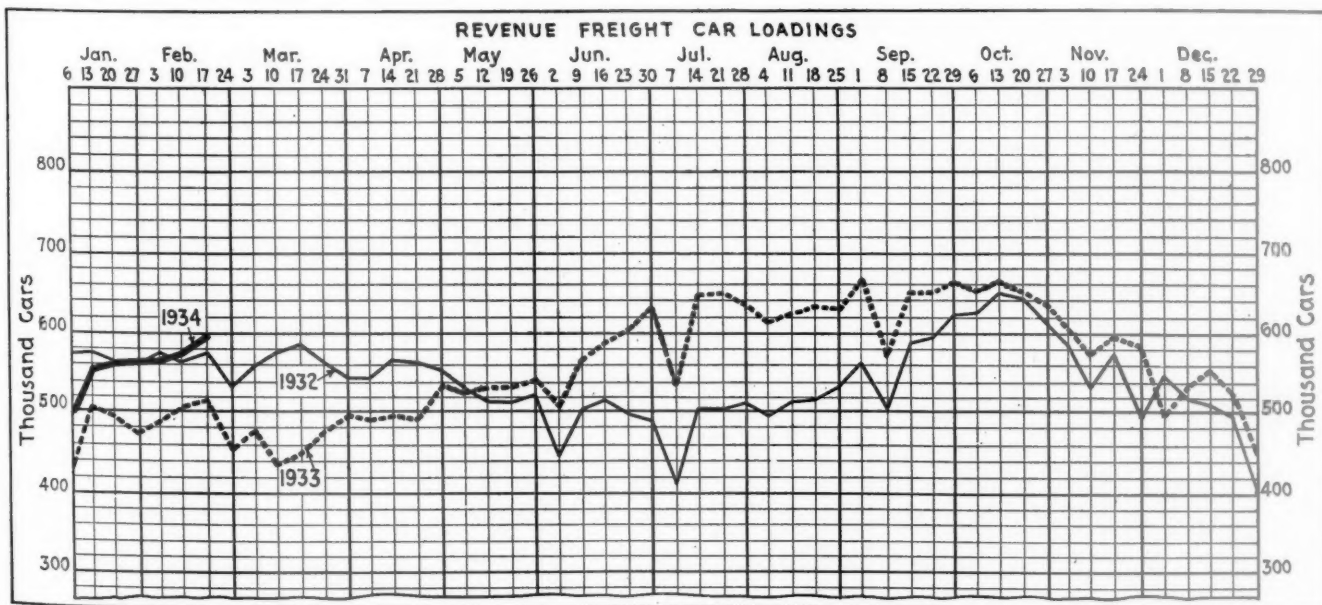
Cumulative total, 7 weeks..... 3,913,060 3,432,459 3,974,494

The freight car surplus for the last half of January averaged 434,428 cars, a reduction of 1,391 cars as compared with the first half of the month. The total included 247,891 box cars, 129,483 coal cars, 24,652 stock cars, and 12,821 refrigerator cars.

### Car Loading in Canada

Car loadings in Canada for the week ended February 17, totaling 40,952, were heavier than for the previous week by 357 cars, which was slightly less than the normal seasonal increase, and the index number declined from 70.40 to 69.98, according to the compilation of the Dominion Bureau of Statistics. The total was, however, 5,073 greater than that of the similar 1933 week.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
February 17, 1934	40,952	23,389
February 10, 1934	40,595	21,563
February 3, 1934	39,543	20,660
February 18, 1933	35,879	18,829
Cumulative Totals for Canada:		
February 17, 1934	277,787	147,030
February 18, 1933	222,276	119,557
February 20, 1932	284,834	145,437





# NEWS

## Express Service Extended by Western Union Tie-Up

Co-operative plan will provide more convenient shipping facilities to homes and offices

Railway Express Agency facilities for serving its patrons will be measurably extended within the next 30 days when a recently-consummated co-operative agreement with the Western Union Telegraph Company becomes operative. Under the plan which was devised by L. O. Head, president of the Railway Express Agency, and R. B. White, president of the Western Union and former president of the Central Railroad of New Jersey, Western Union offices will be equipped to receive and collect for express consignments and telegraph messengers will become express messengers as well.

This is the second co-operative arrangement which has been entered by these companies since Mr. White assumed the presidency of the Western Union. A few weeks ago announcement was made of a plan whereby facilities are now available at Railway Express Agency offices in 460 cities throughout the United States for the acceptance of telegrams and cablegrams for transmission over Western Union lines. These agreements recall that express business was one of Mr. White's special interests during his railway service; while president of the Central of New Jersey he served as chairman of the operating committee which functions in connection with contracts between the railroads and the Express Agency.

The new tie-up, it is pointed out, should provide much added convenience for the utilization by non-commercial shippers of Express Agency services and facilities. The set-up brings to mind what a student of transport problems has recently said of railway freight service, an observation none the less applicable to express service i.e., "It should be as easy and convenient to make a shipment as to mail a letter, send a telegram or cable message or make a telephone call. The carrier which makes shipment as nearly painless as possible has a tremendously important competitive advantage." The present plan would seem to have gone a long way toward realizing this ideal in so far as express service is concerned since householders will henceforth be able immediately to send packages by express through the simple process of summoning a telegraph messenger. As an officer of the Express Agency put it, a housewife, with a package to ship and with a bridge party set for the regular calling hour of the Ex-

press Agency truck, will now be able to get her package off immediately and thus eliminate any possible conflict between her own schedule and that of Express Agency collections.

The plan will also bring added convenience in shipping to the business patron of the Express Agency. Many business offices are equipped with Western Union call boxes for summoning messengers; in the same manner these commercial houses will henceforth be able to summon messengers when they have parcels to ship. Initially, 3,600 Western Union offices will be equipped to handle express consignments.

The plan was outlined by President Head of the Express Agency in the following statement:

"The Railway Express Agency has always prided itself on the service which it provides for the public and in an effort to make this service even more conveniently available, particularly for the householder, it announces the consummation of a co-operative agreement with the Western Union Telegraph Company. The new arrangement will give to householders and offices equipped with telephones or telegraph signals immediate express service without extra cost. A messenger will accept packages he can carry up to the value of \$250. Packages of greater value may be delivered to Western Union Offices.

"This new service is an added convenience and will not in any way curtail the regular vehicle service of the Railway Express Agency. Our trucks will still make regular collections of shipments large or small on request by telephone or otherwise."

## Kansas City Southern Postpones New Wage Basis

Co-ordinator Eastman announced on February 28, after a conference with C. E. Johnston, president of the Kansas City Southern, that Mr. Johnston at his urgent request had agreed to postpone the company's new plan of wage payments and working rules until April 1, in order to afford time for representatives of the employees to confer with the management, with a view to determining whether changes in the rules or otherwise can be accomplished which will give the road the relief in operation which he deems necessary under present-day conditions. The new wage plan and rules were recently considered by an emergency board appointed by the President, which found that the result of the old rules had been to interfere seriously with the most practical and economical operation of the railroad and the rendering of reasonable service to its patrons.

## Railroads Favor Separate Code for Tie Industry

Endorse amendment to the lumber code submitted by that industry's tie division

The American Railway Association, represented by E. A. Clifford, chairman of a committee appointed by the Purchases and Stores division to consider the lumber code, and J. C. Fort, general solicitor of the Association of Railway Executives, appeared before Deputy Administrator E. A. Selfridge of the N. R. A. in Washington on February 2 and 3, at a hearing on proposed amendments to the lumber code, to endorse the amendment submitted by the Tie division of the lumber industry. This amendment provides that sections of the lumber code dealing with the control of production and with minimum prices should not apply to the Tie division. They pointed out that railway ties are not competitive with other lumber and timber and that the exclusion of ties from the provisions in question would not work to the disadvantage of other divisions of the lumber industry. They emphasized also that consumers and the tie producers were in complete accord concerning the amendment. It was also pointed out that farmers and others produce a large part of all railroad ties under conditions which exempt them from the N. R. A. and that this would introduce difficulties in the control of production and prices of ties by companies which are subject to the N. R. A.

Attention was called to the fact that the methods provided for the control of production and the methods provided for fixing average costs are not suitable to the tie industry for the reason that they are based largely upon the use of records of production and cost which are not ordinarily kept by tie producers. Failure to amend the lumber code as here suggested would tend to dry up legitimate sources of production now available and work to the disadvantage of the railroads.

The amendment was opposed by the code authority for the lumber and timber products industry while A. W. McQuillan of the Consumers' Advisory Board and E. L. Fries of the Industrial Advisory Board favored the amendment. John Donovan of the Labor Advisory Board withheld judgment.

## Missouri Pacific Betterments for 1934

Trustees for the Missouri Pacific have been authorized by the district court of St. Louis to spend \$3,434,971 during 1934 for the betterment of the system's roadbed and for new equipment.



## Railroad Labor Questions Coming Rapidly to Fore

Pending bills and wage negotiations assuming prominent place in Washington kaleidoscope

Railroad labor questions are rapidly becoming a prominent feature in the Washington kaleidoscope. Hearings were to begin on Thursday before the Senate committee on interstate commerce on the bill introduced by Senator Black at the request of the Railway Labor Executives' Association to require a basic six-hour day in railroad service; on March 15 the Conference Committee of Managers is to meet with the labor executives to discuss its recent notice of a 15 per cent reduction in wages to succeed the present 10 per cent deduction, and the request of the President that the existing wage basis be continued for another six months; and the labor executives are busily working with members of Congress on their bill to amend the railway labor act and create a national board of adjustment. Meanwhile Co-ordinator Eastman's labor relations section is engaged on a comprehensive study of a large number of proposals in this field. The report on this investigation is not expected for some time and that fact may postpone consideration of some of the numerous bills introduced in Congress at the request of the labor organizations but Mr. Eastman is expected to submit an early report on the national adjustment board bill.

On February 26 and 27 a sub-committee of the Senate committee held a hearing on the bill introduced by Chairman Dill to amend the emergency transportation act 1933, to include within its scope employees of sleeping car and express companies, together with an amendment to include also employees of refrigerator car companies. A letter was sent to the sub-committee by Mr. Eastman in which he said he had no objection to general purpose of the bill provided it was properly worded.

The White House has made public the letter received on February 21 from W. F. Thiehoff, chairman of the Conference Committee of Managers, representing the railroads, in reply to his letter of February 14 suggesting a six-months' extension of the status quo which would expire, under the present agreement on June 30. Mr. Thiehoff said the committee is "most sympathetic to the important considerations of national welfare set forth in your letter" and "will give due consideration to the President's wishes and exert its best efforts to achieve an accord with the employees as soon as possible." He pointed out that an arrangement had been made to meet the labor committee in Washington on March 15 and explained that "this action on the part of the railroads at this time was to make possible a determination of the wage controversy in an orderly manner before the expiration of the ten per cent deduction as contemplated in the agreement of June, 1933. Otherwise the peak basic wage rates of 1929 would be automatically restored with consequent disaster to the whole railway industry."

Approximately 1,500 general chairmen of

railroad labor organizations from railroads throughout the country are to be in attendance at the time of the March 15 conference.

Creation of a National Board of Adjustment, consisting of 42 members in four divisions, each to have jurisdiction over specified classes of labor disputes not otherwise adjusted, is proposed in bills introduced at the request of the labor organizations as S.2651 by Senator Dill and as H.R.7650 by Representative Crosser. Equal numbers of the members of each division would be selected by the railroads and the labor organizations. On inability of a division to reach an agreement an arbitrator would be selected to sit with it and make an award. Provision is also made for the submission of disputes to the Board of Mediation for its offices. The bills also include sections intended to prohibit "company unions."

Representative Crosser has introduced as H.R.8138 a bill to provide retirement insurance for railroad employees. Representative Kramer has introduced H.R.8166 to regulate the hand brake equipment on freight cars. Representative Wood has introduced as H.R.8238 a bill to prohibit railroads from permitting any employees to engage in construction, repair, or inspection of railroad tracks or bridges located outside yard limits unless the foreman and at least three of the employees "shall have successfully passed flagging rules."

### Northern Pacific Veterans' Meeting

The annual convention of the Veterans' Association of the Northern Pacific will be held at Duluth, Minn., on June 14-16.

### Club Meeting

The Car Foremen's Association of Chicago will hold its next meeting on Monday evening, March 12, at the La Salle Hotel, Chicago. R. E. Forbes, assistant superintendent of the Chicago Car Inspection Bureau, will speak on the proposed changes in the A. R. A. interchange rules for 1935.

### Reduced Rates for Drought-Stricken Areas

The Interstate Commerce Commission on February 21, on application of E. B. Boyd as agent for various carriers, authorized the establishment of reduced rates, to expire May 31, on hay, straw, livestock feed, poultry feed, fuel wood, grain, and livestock, between points in drought-stricken areas in various counties in Colorado, Michigan, South Dakota, Texas, Utah, Wisconsin, and Wyoming.

### North Western to Have Two Exhibits at Fair

The Chicago & North Western will have two exhibits again this year at A Century of Progress Exposition at Chicago. An exhibit within the Travel and Transport building will depict the first trip of the "Pioneer" between Chicago and the Des-Plaines river, while outside and south of the Travel and Transport dome the railroad will maintain North Western Park in which it will display one of its Class H locomotives.

## Pooling to Save Another Half-Million Train-Miles

Canadian Lines further curtail passenger competition—  
More changes planned

Pooling of train services and the joint use of terminal and other facilities by the Canadian Pacific and the Canadian National, it would appear, will be prosecuted as far as it is possible under separate management of the two properties. For many months past experts of the two roads have been conferring on such plans and since the assumption of office by the board of trustees of the Canadian National these efforts have been intensified, and Hon. Charles P. Fullerton, chairman of the C. N. R. board, and President E. W. Beatty of the C. P. R. have had several meetings. Thus far the joint economies have been confined largely to pooling of train services, particularly in the Montreal-Toronto and Ottawa-Toronto areas, but study is now being given to the Western area and the transcontinental services. Later a joint statement by the heads of the two roads may be expected on the question of joint use of facilities, including terminals, hotels, telegraph and express services. A number of hotels may disappear from the list, including an adjustment of the situation in Vancouver.

The C. N. R. built a hotel, at that point which is not yet opened, although it was completed some time ago. Its cost will be about \$7,000,000. One suggested solution of the problem is that the Hotel Vancouver, built some time ago by the C. P. R. be closed as a hotel and sold for commercial or apartment purposes, and that the two roads jointly operate the new C. N. R. hotel.

There is little probability that the pressing terminal problem in Montreal, arising from the uncompleted C. N. R. facilities there, will be solved for some time. In the meantime the heads of the two roads last week issued a joint statement on the further pooling of train services in Ontario and Quebec, effective March 11.

The first pooling arrangement, it will be recalled, was that of the fast afternoon trains of the two companies between Montreal and Toronto, and the Ottawa-Toronto trains. Through tickets via either line are honored on the pool trains which are equally Canadian National and Canadian Pacific trains regardless of the ownership of the section of track over which they may run.

Beginning March 11 the Canadian National morning trains, leaving Montreal for Toronto at 9.45 a. m., and leaving Toronto for Montreal at 9.00 a. m., will operate as pool trains in and out of Bonaventure Station at Montreal. The present Canadian Pacific morning train in each direction between Montreal and Toronto will be withdrawn. The Canadian Pacific cancels its Ottawa-Bedell train. In place of this there will be a pooled train each way between Ottawa, Ont., and Brockville via Smiths Falls, providing a connection similar to that for the fast afternoon train in each direction.

The present night trains of both the

Canadian Pacific and Canadian National between Montreal and Toronto will continue to operate from their respective stations, but they will operate as pool trains.

In connection with the operation of the fast afternoon trains pooled between Montreal and Toronto, arrangements have been made for the eastbound train to cross over from Canadian National to Canadian Pacific tracks at Dorval, P. Q., west of Montreal, stopping at Montreal West and Westmount before arriving at Windsor Station (C. P. R.) instead of at Bonaventure Station (C. N. R.) as at present. Thus the afternoon pooled trains will use Windsor Station for both departure and arrival at Montreal.

Between Montreal and Quebec, Canadian Pacific trains leaving Montreal at 9.15 a. m., 5.00 p. m. and 11.30 p. m., and leaving Quebec for Montreal at 1.30 p. m. and 5.00 p. m. and 11.55 p. m., will be operated as pooled trains over the Canadian Pacific to and from their present stations in Montreal. The Canadian National will cancel its night train in each direction and also their fast afternoon trains leaving Montreal for Quebec at 6.10 p. m. and leaving Quebec for Montreal at 3.15 p. m., substituting for the cancelled trains such services as are necessary for intermediate business.

The estimated saving to the two companies from these arrangements will amount to almost 500,000 train-miles per annum, the economies being divided equally between the two companies.

### President Proposes Communications Commission

In a special message to Congress on February 26 President Roosevelt recommended the creation of a Federal Communications Commission and the transfer of such authority over agencies of communication now vested in the Interstate Commerce Commission and the Federal Radio Commission to the new body. Bills to carry out the recommendations were introduced in Congress the next day.

### Complaints Against Forwarding Code Rates and Rules Heard

A public hearing on complaints against the rates, tariffs, charges and terminal rules promulgated by the code authority for the domestic freight forwarding industry to be held March 3, has been announced by Division Administrator Sol A. Rosenblatt, of the N. R. A. In accordance with authority given by the code the code authority prescribed a schedule of charges. If the Administrator cancels the code authority rates as a result of facts produced in the hearing, the difference between the code authority schedule and the published rates in effect on February 13 will be refunded.

### Seven Passengers Killed Near Pittsburgh

In the derailment of an eastbound passenger train, No. 1638, of the Pennsylvania near Federal street, in Pittsburgh, Pa., on Monday evening, February 26, the engineer, fireman and seven passengers were killed and forty passengers, employees and

others were injured. One of the passengers killed was the wife of W. M. Wardrop, assistant to the general manager of the Pennsylvania. The train consisted of locomotive and five cars. The cause of the derailment appears, at this writing, not to have been determined. The temperature at the time was about zero. The locomotive fell about 20 feet to the street at the side of the railway, and a signal cabin and a dwelling house were badly damaged.

### Reduced Rates Proposed on Automobiles to California

Examiner J. Edgar Smith of the Interstate Commerce Commission has recommended in a proposed report that the commission authorize fourth section relief to permit the railroads to reduce rates on passenger automobiles from eastern territory, particularly Detroit, to California ports, to meet competition via rail-water routes via the Panama Canal, without making corresponding reductions at intermediate points. The recommendation is made subject to a condition that the routes via which the rates shall apply shall not touch or pass through the states of Montana, Idaho, Oregon, or Washington, as well as other conditions, and Examiner Smith recommended that the application be denied as to freight automobiles.

### Southwest Shippers' Board

The thirty-fifth regular meeting of the Southwest Shippers' Advisory Board will be held at Ft. Worth, Tex., on March 8. The program will include a discussion of freight loss and damage, an analysis of Co-ordinator Eastman's report to Congress by F. A. Leffingwell, secretary of the Texas Industrial Traffic League, and an address on the motor carrier transportation code by E. D. Balcom, president of the Dallas Transfer & Terminal Warehouse Company.

At a luncheon to be given by the Traffic Club of Ft. Worth, Cecil E. Munn, general chairman, will speak on the purposes of the advisory board and L. M. Betts, manager of the Car Service division of the American Railway Association, will speak on co-ordination between shippers and carriers.

### Report on Ownership of American Refrigerator Transit Company

A report filed by Special Master Joseph W. Jamison with the federal district court at St. Louis on the issues raised in a claim of the Wabash against the Missouri Pacific over the joint operation of the American Refrigerator Transit Company, states that the Wabash is entitled to an accounting of surplus revenues as of May 19, 1917, when stockholders' contracts of 1881 and 1894 are said to have been cancelled, and that on the date of cancellation the interest of the Wabash in the refrigerator line was 53.5 per cent and that of the Missouri Pacific 46.5 per cent. The railroads formed the refrigerator line in 1881 to provide joint service for perishable freight. The report also holds that the capital stock of the refrigerator company in the hands of the two railroads should represent the beneficial interest of each of the railroads in the trust estate

held in the name of the American Refrigerator Transit Company. "To again bring this about, either a redistribution of the present capital stock should be made between the Wabash and the Missouri Pacific on the basis of 46.5 and 53.5 per cent, or the A. R. T. should be required to issue additional shares and distribute them in such proportions that when the distribution is completed, each railroad will own the above percentages of the total stock."

### Freight Traffic in 1933

Freight traffic moved in 1933 by the railroads totaled 275,082,712,000 net ton-miles, according to complete reports for the year compiled by the Bureau of Railway Economics. This was an increase of 16,034,040,000 net ton-miles, or 6.2 per cent, above the total for 1932, but a reduction of 65,065,910,000 net ton-miles, or 19.1 per cent, under that for 1931. In the Eastern district, there was an increase of 6.8 per cent compared with 1932; in the Southern an increase of 6.3 per cent and in the Western 5.2 per cent.

In December, freight traffic carried by the Class I railroads amounted to 22,000,788,000 net ton-miles, an increase of 4.2 per cent above the same month in 1932, but a reduction of 2.9 per cent under December, 1931. The Eastern district reported for December 0.5 per cent above the same month the year before; the Southern 0.7 per cent, and the Western 11.9 per cent.

### I. C. C. Imposes Condition Requiring Sinking Fund

Carrying out the suggestion made in its annual report that if railroads did not do so voluntarily the commission would itself take steps to require the establishment of sinking funds for the amortization of bond issues, Division 4 of the Interstate Commerce Commission has taken such action in the case of an issue proposed by the Western Maryland. In a report dated February 23, made public on February 28, the division authorized the company to procure authentication and delivery of \$1,776,000 of first and refunding mortgage 5½ per cent bonds, in partial reimbursement of capital expenditures, subject to the condition that the applicant first enter into a supplemental indenture or indentures with the trustee of the first and refunding mortgage providing for the creation, out of net earnings before the payment of dividends, of a sinking fund sufficient to retire, at or before maturity, such first and refunding mortgage bonds as may hereafter be actually issued, and submit such indenture or indentures for the commission's approval.

In correspondence with the commission's Bureau of Finance the company had stated that it was its intention, in view of substantial fixed charges under which it operates, not to market the bonds unless some unforeseen situation develops necessitating a departure from this intention; also that there has been no occasion for the creation of a sinking fund for these bonds and that its financial condition has not been such as to enable it to maintain such a fund. Division 4, however, expressed the opinion



that no additional bonds should be drawn down under the mortgage unless some provision be made for retiring the bonds now in the treasury and pledged and such other bonds as may hereafter be authenticated and delivered in the event they are actually issued. Commissioner Porter dissented, objecting to the proposed issue.

### President Not in Favor of N. R. A. Code for Railroads

A pronounced difference of opinion as to whether the railroads either practically, legally, or advisedly could be placed under the jurisdiction of the National Recovery Administration and made subject to a code appears to have developed between President Roosevelt and Co-ordinator Eastman, on one hand, and General Hugh S. Johnson, administrator of the N.R.A. on the other hand. The President on Wednesday reiterated his previously expressed opinion that the N.R.A. is inapplicable to the railroads, and that they constitute a separate problem, covered by separate laws, shortly after the Association of Railway Executives had received a surprising letter signed by General Johnson suggesting immediate consideration of the presentation of a code for the railroad industry. The letter was the more surprising because General Johnson had stated that "by direction of the President" he was calling attention to the fact that no code had been filed covering the railroad transportation industry, that the separate railroads had not signed the President's Re-employment Agreement and that "as a result, measures have not been taken in the transportation industry to establish minimum wages or maximum hours, or otherwise to effectuate the policy of the national industrial recovery act."

Pointing out that codes of a fair competition are normally presented by trade or industrial associations, the letter included a suggestion that the president has power to impose a code although the provisions of the section of the law in which this is authorized have not yet been invoked in any instance.

It could not be immediately ascertained at the N.R.A. whether the letter actually represented General Johnson's views or whether it was in the nature of a form letter prepared by a subordinate, of the kind sent to industries generally that have not yet submitted codes. Last August the Railway Labor Executives' Association called on the President and asked that the railroads be put under a code but the President referred the question to Co-ordinator Eastman, who submitted a report reaching the conclusion that as a matter of law the railroads are not subject to the N.R.A. and moreover that it would be unwise and inadvisable to subject the railroads to a code if it were legal. The President then replied to A. F. Whitney, chairman of the Railway Labor Executives' Association, acquiescing in Mr. Eastman's views.

### I. C. C. Reports Salaries

The following table made public by the Interstate Commerce Commission summarizes the returns by The Pullman Company to the Interstate Commerce Commission in response to a circular of inquiry issued as of December 19, 1933, in regard

to the compensation of officers, directors, and other persons who received \$10,000 or more during the year 1933:

	Salary per annum as of close of year 1933	Other compensation for the year 1933
President .....	\$51,300.00	\$520.00
Vice President .....	27,485.71	160.00
Vice President and General Manager .....	36,075.00	.....
Vice President .....	17,300.00	.....
Vice President and Assistant to President .....	20,820.00	.....
Vice President .....	15,675.00	.....
General Solicitor .....	14,825.00	.....
General Attorney .....	13,125.00	.....
Comptroller .....	15,675.00	.....
Vice President .....	16,250.00	.....

Certain officers of The Pullman Company are also officers of Pullman Incorporated, but no officer of the reporting company received any compensation from any other common carrier, affiliated or otherwise, except the President, who received a fee of \$10 for attendance at a directors' meeting of The Pullman Railroad and who has since resigned as a director of that company.

The following table summarizes the returns by express companies reporting annual compensation of \$10,000 or more:

	Salary per annum as of close of year 1933	Other compensation for the year 1933
Railway Express Agency, Incorporated:		
President .....	\$60,000.00	\$480.00
Executive Vice President .....	16,200.00	.....
Assistant to President .....	10,800.00	.....
Secretary .....	10,800.00	.....
Vice President—Operations .....	18,000.00	.....
Vice President—Operations .....	16,200.00	.....
Vice President—Operations .....	22,500.00	.....
Vice President—Operations .....	22,500.00	.....
Vice President—Accounting .....	22,500.00	.....
Vice President and Treasurer .....	22,500.00	.....
Vice President and General Counsel .....	22,500.00	.....
General Solicitor .....	13,950.00	.....
General Attorney .....	10,800.00	.....
General Attorney .....	10,000.00	.....
General Attorney .....	10,000.00	.....
Vice President—Traffic .....	18,000.00	.....
Vice President—Personnel .....	18,000.00	.....
General Manager .....	13,500.00	.....
General Manager .....	11,700.00	.....
General Manager .....	10,800.00	.....
General Manager .....	10,800.00	.....
Retired Official (Pensioner) .....	28,517.76	.....
Retired Official (Pensioner) .....	11,680.56	.....
Southeastern Express Company:		
President .....	16,200.00	.....

At the same time the commission made public similar tables showing the salaries of officers of the pipe line and water carrier companies under its jurisdiction.

### Negotiations Avert Strike on North Western

A series of conferences which began on February 21 between Fred W. Sargent, president of the Chicago & North Western, and representatives of 13 labor organizations, are being held to settle the disagreements between the management and employees. The decision to negotiate was made after the employees had started to take a strike vote because, as the unions contend, the road had made no reply to a demand for the adjustment of 512 grievances, some of which run back to 1928 and most of which relate to alleged failure to observe seniority rights when laying off employees. Voting, which started on Feb-

ruary 5, is understood to have been favorable to a strike.

In the negotiations now under way, many of the grievances have been adjusted, 80 being ironed out during the first two conferences. It is the intention of the management to work out a plan to speed up the hearing of complaints and prevent the accumulation of cases.

### Senate Rejects Cut in Valuation Appropriation

The Senate on February 21 rejected an amendment proposed by the committee on appropriations to the independent offices appropriation bill which would have reduced the amount allowed for the work of the Bureau of Valuation from \$1,052,700 as recommended by the Budget bureau and passed by the House, to \$526,350. The reduction was voted down after some debate during which a letter written by Commissioner Eastman, as federal co-ordinator of transportation, to Director Lewis of the Budget bureau, was read, in which Mr. Eastman expressed the opinion that a further cut of \$500,000 would make it impossible for the commission to meet the requirements of the law as it was amended last June. He said the reduction from \$2,750,000 from the amount allowed for 1933 was drastic enough and that the present force of the bureau is required to bring the records and inventories of the carriers to date, although the commission has completed the primary valuation. In order to maintain the probity of the work, he said, the reports of carriers must be policed and checked in the field; "otherwise the work soon loses its integrity," and "at this particular time, when all phases of the railroad problem and the future of the railroads and their rates and services are under close scrutiny, such records have special significance and value." He also pointed out that the technical men of the Bureau's staff are being drawn upon by the co-ordinator and others for various studies. If the reduction should be made, he said, "the Bureau of Valuation might as well be abolished. The work is needed and ought to be done." Senators Byrnes, Dill, La Follette, and Barkley defended the amount allowed in the House bill, while Senator McCarran supported the reduction.

### North Western Extends Winter Sports Excursions

As a result of the popularity of winter sports excursions to the north woods of Wisconsin during January and February, the Chicago & North Western has extended the plan into March and will run additional ones on March 2 and 9. Under these all-expense tours to the north woods parties left Chicago every Friday night between December 29 and February 23, inclusive, the train being known as the "Winter Sports Special." They arrived in Eagle River, Wis., the following morning. Arrangements were made with Jack-O-Lantern Lodge near Eagle River for accommodations. The entire trip cost \$20, including rail fare, lower berth both ways, nine meals and two nights' lodging.

Each week-end additional passengers were secured and the average, for excursions thus far, has been 35 people. Agents



and conductors report that general satisfaction is expressed by the participants. An interesting feature of the excursions is the satisfactory type of person secured, the \$20 being a price too high for the low-rate excursionist and too low for the highest class of travel.

### More Snow in New York

The snow storm of February 26, covering an extensive territory, was in New York much like that of February 20, reported in the *Railway Age* of February 24; and the railroads suffered considerable inconvenience, though the Long Island was the only one reporting unusual delays. That road, with its numerous short branches and dense suburban passenger traffic, had trouble with its electrified lines, similar to the troubles of the previous week, but not nearly so many of them. Many trains, however, had to be annulled. One of the most serious delays was near Southold, many miles east of the electrified territory, where a deep drift in a cut caused suspension of traffic for several hours.

Following the storm of the previous week, and responding to criticisms not only by passengers and the press, but also by the officials of the state, the railroad company issued on February 21 the following explanation:

"Between one and two o'clock Tuesday morning the temperature dropped rapidly, in some places about 2 degrees every 15 minutes. Suddenly the wind shifted to the northwest, driving the snow and forming heavy sheetings of ice from the slush.

"The company immediately ordered out its plows and sent hurry calls for extra men. Not one of the labor agencies, however, was able to supply an additional man by five o'clock in the morning. The company immediately called its entire maintenance force, including carpenters, linemen, third rail gangs, painters and mechanics.

"Trains were run in all directions in an attempt to keep the road open, but formation of ice soon caused arcing which stalled the trains and in many cases threw the power off; and the snow rapidly drifted to depths of eight feet.

"Chloride cars, which cleared the third rails by melting the ice, were run through, but in many places the use of these cars was ineffective because immediately after the plow had removed the snow, a new drift was formed over the entire track.

"By ten o'clock Tuesday morning, the force had been augmented by 350 additional men, whose efforts were in vain in combating the fury of the driving, fine snow. Forty men, under the direct supervision of the division engineer, worked on two crossovers for 45 minutes before they were able to throw the switches, although all the electric heaters were working. Even after plows cut through, it was necessary to reinforce electrically-operated trains by steam engines. On the North Shore branch, for instance, the rotary plow went through four times, followed by the chloride car, but even then the electric trains could not run because of ice on the third rails and snow drifts. At Rockaway Park, cars were buried under seven feet

of snow and at Southold, an engine, as late as Wednesday, was buried under snow so firmly that it could not move either way. It was still necessary on Wednesday in many places to dig the snow out by shovels, since it could not be reached by plows, chloride cars or flangers.

"As soon as the company learned of the seriousness of the situation, all its agents were authorized to employ men to dig out and clear the platforms and assist in any way to keep trains moving. Many agents, however, were unable to obtain additional men to help them."

### Tank Car Service Industry Code Hearing

Reasonable cost recovery by the establishment of a code minimum is essential to "maintain and preserve" the tank car service industry's part in national transportation, according to Leo F. Wormser, counsel for the Tank Car Service Association, who presented a proposed code of fair competition for the tank car service industry to Deputy Administrator L. H. Peebles of the N. R. A. at a public hearing in Washington on February 13. Pointing out that the service performed by the industry is "an integral part of our transportation system," Wormser declared that proponents were seeking only a "partial cost recovery and not a total recovery." He said that under normal conditions the charge for a tank car would be about \$32.50 per month but under present conditions, he said, the charges for rental range all the way down to zero. Mr. Wormser outlined in detail, along with other sections of the proposed code, the article on leases which provides that the code authority shall establish a code minimum for supplying tank cars, subject to the approval of the Administrator. Such minimum, the code provides, shall apply to all three of the methods commonly used in the leasing of cars.

Further testimony to the effect that a code minimum is necessary was given by Leslie Selig, of Chicago, secretary of the association, and also president of the General American Transportation Service. He declared that although the railroads make a "mileage allowance" of one and one-half cents per mile, under I. C. C. tariffs, this allowance "does not even come close" to covering ownership cost as intended. He cited other destructive practices prevailing in the industry in stressing the importance of a code minimum.

Mr. Wormser offered numerous amendments to various sections of the proposed code. One of these stipulates that before a code minimum can be established, the Code Authority must determine that an emergency exists as a result of "destructive price-cutting." Another amendment proposed would exclude tank cars from the definition of the "industry" known as 105-A, 106-A, 108 and 108-A, I. C. C. specifications. Under other amendments proposed by Wormser overtime compensation for employees would be paid at the rate of time and one half in lieu of the time and one-third rate provided in the code. Forty-eight hours would be the maximum for emergency workers instead of 44 as previously proposed, and elevator

operators and cleaners would not be classified as service employees under the 48 hours maximum hour provision, under another proposed amendment.

### W. P. Borland Retires from Service

Wilfred P. Borland, director of the Bureau of Service of the Interstate Commerce Commission since 1918, retired on February 28 after over thirty years of



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W. P. Borland

service with the commission, under civil service rules, having reached the age of 74. The commission has appointed to succeed him W. J. Patterson, who has been assistant director of the Bureau, and T. C. Hays, who has been chief of the section of safety appliances, becomes assistant director. Mr. Borland was the guest of honor at a testimonial dinner on February 27, attended by members of the commission, officers of the American Railway Association, employees of the bureau, and representatives of some of the labor organizations.

Mr. Borland was born February 5, 1860, at Detroit, Mich., and after leaving high school became a brakeman on the Flint & Pere Marquette. He later served as fire-



Harris & Ewing

W. J. Patterson

man, engineman, yardman, and conductor on various railroads and after a few years out of railroad service he entered the service of the commission in 1903 as clerk to the Block Signal Board. He later became secretary of the board, assistant director

of the Bureau of Safety, and in 1918, director of the bureau.

W. J. Patterson was born at Neenah, Wis., on June 4, 1880. He entered railroad service in 1896 as a call boy in the superintendent's office of the Wisconsin Central at Stevens Point, Wis., where he remained for two years. In 1898 he was employed as a brakeman on the St. Paul division of the Chicago, St. Paul, Minneapolis & Omaha, and in the spring of 1899 as a locomotive fireman on the New Mexico division of the Atchison, Topeka & Santa Fe. In the summer of 1899 he returned to the Wisconsin Central as a brakeman and switchman; he was promoted to conductor in the spring of 1902 and remained in that capacity until the summer of 1906 when he was employed as conductor on the Northern Pacific. He continued in that capacity on the Fargo, Dakota and Seattle divisions of that line until September, 1914, when he entered the service of the Interstate Commerce Commission as an inspector of safety appliances. In August, 1918, he was promoted to assistant director of the bureau, which position he has occupied until his present promotion.

## Meetings & Conventions

The following list gives names of secretaries, date of next or regular meetings and places of meetings.

**AIR BRAKE ASSOCIATION.**—T. L. Burton, Room 2205, 150 Broadway, New York, N. Y.  
**ALLIED RAILWAY SUPPLY ASSOCIATION.**—F. W. Venton, Crane Company, 836 S. Michigan Ave., Chicago, Ill. To meet with Air Brake Association, Car Department Officers' Association, International Railroad Master Blacksmiths' Association, International Railway Fuel Association, International Railway General Foremen's Association, Master Boiler Makers' Association and the Traveling Engineers' Association.  
**AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.**—W. R. Curtis, F. T. R., M. & O. R. R., Chicago, Ill.  
**AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.**—E. L. Duncan, 332 S. Michigan Ave., Chicago, Ill.  
**AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.**—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York, N. Y.  
**AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.**—F. O. Whiteman, Union Station, St. Louis, Mo. Annual meeting, June 19-21, 1934, Hotel Sherman, Chicago, Ill.  
**AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.**—E. A. Abbott, Poole Bros., Inc., 85 W. Harrison St., Chicago, Ill.  
**AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.**—F. R. Borger, C. I. & L. Ry., 836 Federal St., Chicago, Ill.  
**AMERICAN ELECTRIC RAILWAY ASSOCIATION.**—(See American Transit Association).  
**AMERICAN RAILWAY ASSOCIATION.**—H. J. Forster, 30 Vesey St., New York, N. Y.  
**Division I.—Operating.**—J. C. Caviston, 30 Vesey St., New York, N. Y.  
**Freight Station Section.**—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill.  
**Medical and Surgical Section.**—J. C. Caviston, 30 Vesey St., New York, N. Y.  
**Protective Section.**—J. C. Caviston, 30 Vesey St., New York, N. Y.  
**Safety Section.**—J. C. Caviston, 30 Vesey St., New York, N. Y.  
**Telegraph and Telephone Section.**—W. A. Fairbanks, 30 Vesey St., New York, N. Y. Annual meeting, June 12-14, 1934, Hotel Stevens, Chicago, Ill.  
**Division II.—Transportation.**—G. W. Covert, 59 E. Van Buren St., Chicago, Ill.  
**Division III.—Traffic.**—J. Gottschalk, 143 Liberty St., New York, N. Y.  
**Division IV.—Engineering.**—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 13-14, 1934, Palmer House, Chicago, Ill.  
**Construction and Maintenance Section.**—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 13-14, 1934, Palmer House, Chicago, Ill.  
**Electrical Section.**—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill.

**Signal Section.**—R. H. C. Balliet, 30 Vesey St., New York, N. Y. Annual meeting, March 12-13, 1934, Hotel Stevens, Chicago, Ill.  
**Division V.—Mechanical.**—V. R. Hawthorne, 59 E. Van Buren St., Chicago, Ill.  
**Equipment Painting Section.**—V. R. Hawthorne, 59 E. Van Buren St., Chicago, Ill.  
**Division VI.—Purchases and Stores.**—W. J. Farrell, 30 Vesey St., New York, N. Y.  
**Division VII.—Freight Claims.**—Lewis Pilcher, 59 E. Van Buren St., Chicago, Ill. Annual meeting, May 22-24, 1934, Hotel Commodore, New York, N. Y.  
**Division VIII.—Motor Transport.**—George M. Campbell, 30 Vesey St., New York, N. Y.  
**Car Service Division.**—C. A. Buch, 17th and H Sts., N. W., Washington, D. C.  
**AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.**—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Chicago, Ill.  
**AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.**—J. A. Senter, Ind. Agt., N. C. & St. L. Ry., Nashville, Tenn. Annual meeting, 1934, Kansas City, Mo.  
**AMERICAN RAILWAY ENGINEERING ASSOCIATION.**—Works in co-operation with the American Railway Association, Division IV.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 13-14, 1934, Chicago, Ill.  
**AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.**—J. L. James, L. & N. Employees' Magazine, Louisville, Ky.  
**AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.**—G. G. Macina, C. M., St. P. & P. R. R., 11402 Calumet Ave., Chicago, Ill. Exhibit by Tool Foremen Suppliers' Association.  
**AMERICAN SHORT LINE RAILROAD ASSOCIATION.**—R. E. Schindler, Union Trust Bldg., Washington, D. C.  
**AMERICAN SOCIETY OF MECHANICAL ENGINEERS.**—Calvin W. Rice, 29 W. 39th St., New York, N. Y. Railroad Division.—Marion B. Richardson, Ahrens & Richardson, 30 Church St., New York, N. Y.  
**AMERICAN TRANSIT ASSOCIATION.**—Guy C. Heckler, 292 Madison Ave., New York, N. Y. Annual meeting, September 24-28, 1934, Cleveland Public Auditorium, Cleveland, Ohio.  
**AMERICAN WOOD PRESERVERS' ASSOCIATION.**—H. L. Dawson, 1427 Eye St., N. W., Washington, D. C. Annual meeting, 1935, New York, N. Y.  
**ASSOCIATION OF RAILWAY CLAIM AGENTS.**—H. D. Morris, District Claim Agent, Northern Pacific Ry., St. Paul, Minn. Annual meeting, May 16-18, 1934, Hotel Cleveland, Cleveland, Ohio.  
**ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.**—Jos. A. Andreucetti, C. & N. W., 1519 Daily News Building, 400 W. Madison St., Chicago, Ill. Exhibit by Railway Electrical Supply Manufacturers' Association.  
**ASSOCIATION OF RAILWAY EXECUTIVES.**—Stanley J. Strong, Transportation Building, Washington, D. C.  
**BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.**—J. W. Shoop, The Lehon Company, Oakley Ave., 44th and 45th Sts., Chicago, Ill. Meets with American Railway Bridge and Building Association.  
**CANADIAN RAILWAY CLUB.**—C. R. Crook, 2276 Wilson Ave., N. D. G., Montreal, Que. Regular meetings, second Monday of each month, except June, July and August, Windsor Hotel, Montreal, Que.  
**CAR DEPARTMENT OFFICERS' ASSOCIATION.**—A. S. Sternberg, M. C. B. Belt Ry. of Chicago, 7926 S. Morgan St., Chicago, Ill.  
**CAR FOREMEN'S ASSOCIATION OF CHICAGO.**—G. K. Oliver, 2514 W. 55th St., Chicago, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.  
**CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.**—J. W. Krause, Room 299, 610 S. Main St., Los Angeles, Cal. Club not active at present time.  
**CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.**—J. F. Brady, Main and Barton Sts., St. Louis, Mo. Operation suspended indefinitely.  
**CENTRAL RAILWAY CLUB OF BUFFALO.**—M. D. Reed, 1817 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.  
**CINCINNATI RAILWAY CLUB.**—D. R. Boyd, 2920 Utopia Place, Hyde Park, Cincinnati, Ohio. Operation suspended indefinitely.  
**CLEVELAND RAILWAY CLUB.**—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Regular meetings, second Monday of each month, except June, July and August, Hotel Cleveland, Cleveland, Ohio.  
**INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.**—W. J. Mayer, Michigan Central R. R., Detroit, Mich.  
**INTERNATIONAL RAILWAY FUEL ASSOCIATION.**—T. D. Smith, 1660 Old Colony Building, Chicago, Ill.

**INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.**—Wm. Hall, 1061 W. Wabasha St., Winona, Minn.  
**MASTER BOILER MAKERS' ASSOCIATION.**—A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y.  
**NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.**—James B. Walker, 270 Madison Ave., New York, N. Y. Annual Meeting, November 12-15, 1934, Washington, D. C.  
**NATIONAL RAILWAY APPLIANCE ASSOCIATION.**—C. W. Kelly, Suite 322, 910 S. Michigan Ave., Chicago, Ill. Annual meeting, March 12, 1934, 910 S. Michigan Ave., Chicago, Ill.  
**NATIONAL SAFETY COUNCIL.**—Steam Railroad Section (See Safety Section, American Railway Association).  
**NEW ENGLAND RAILROAD CLUB.**—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Copley-Plaza Hotel, Boston, Mass.  
**NEW YORK RAILROAD CLUB.**—D. W. Pye, 30 Church St., New York, N. Y. Regular meetings, third Friday of each month, except June, July and August, 29 W. 39th St., New York, N. Y.  
**PACIFIC RAILWAY CLUB.**—W. S. Wollner, P. O. Box 3275, San Francisco, Cal. Regular meetings, second Thursday of each month, alternately in San Francisco and Oakland.  
**RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.**—E. R. Woodson, Transportation Building, Washington, D. C. Annual meeting, June 26-29, 1934, Greenbrier Hotel, White Sulphur Springs, W. Va.  
**RAILWAY BUSINESS ASSOCIATION.**—P. H. Middleton (Treas. and Asst. Sec.), First National Bank Building, Chicago, Ill.  
**RAILWAY CLUB OF PITTSBURGH.**—J. D. Conway, 1841 Oliver Building, Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.  
**RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.**—Edward Wray, 9 S. Clinton St., Chicago, Ill. Meets with Association of Railway Electrical Engineers.  
**RAILWAY FIRE PROTECTION ASSOCIATION.**—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting, October 16-18, 1934.  
**RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.**—J. D. Conway, 1841 Oliver Building, Pittsburgh, Pa. Meets with Mechanical Division, Purchases and Stores Division and Motor Transport Division, American Railway Association.  
**RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.**—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with Telegraph and Telephone Section of A. R. A. Division I.  
**RAILWAY TIE ASSOCIATION.**—Roy M. Edmonds, 1252 Syndicate Trust Building, St. Louis, Mo.  
**RAILWAY TREASURY OFFICERS' ASSOCIATION.**—L. W. Cox, 1428 Broad Street Station Building, Philadelphia, Pa.  
**ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.**—T. F. Donahoe, Gen. Suprv. Road, Baltimore & Ohio, Pittsburgh Pa. Annual meeting, September 18-20, 1934, Hotel Stevens, Chicago, Ill.  
**ST. LOUIS RAILWAY CLUB.**—B. W. Frauenthal, Drawer 24, M. P. O., St. Louis, Mo. Meetings temporarily suspended.  
**SIGNAL APPLIANCE ASSOCIATION.**—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with A. R. A. Signal Section.  
**SOCIETY OF OFFICERS, EASTERN ASSOCIATIONS OF RAILROAD VETERANS.**—M. W. Jones, Baltimore & Ohio, Mt. Royal Station, Baltimore, Md. Annual meeting, October 6-7, 1934, Buffalo, N. Y.  
**SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.**—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.  
**SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.**—R. G. Parks, A. B. & C. R. R., Atlanta, Ga.  
**SUPPLY MEN'S ASSOCIATION.**—E. H. Hancock, Treasurer, Louisville Varnish Co., Louisville, Ky. Meets with A. R. A. Division V, Equipment Painting Section.  
**TOOL FOREMEN SUPPLIERS' ASSOCIATION.**—E. E. Caswell, Union Twist Drill Co., 11 S. Clinton St., Chicago, Ill. Meets with American Railway Tool Foremen's Association.  
**TORONTO RAILWAY CLUB.**—N. A. Walford, P. O. Box 8, Terminal "A," Toronto, Ont. Regular meetings, first Friday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.  
**TRACK SUPPLY ASSOCIATION.**—L. C. Ryan, Oxweld Railroad Service Co., Carbon & Carbide Building, Chicago, Ill. Meets with Roadmasters' and Maintenance of Way Association.  
**TRAVELING ENGINEERS' ASSOCIATION.**—W. O. Thompson, 1177 E. 98th St., Cleveland, Ohio.  
**WESTERN RAILWAY CLUB.**—C. L. Emerson, C. M., St. P. & P., Chicago, Ill. Regular meetings, third Monday of each month, except June, July, August and September, Hotel Sherman, Chicago, Ill.



## Equipment and Supplies

### P.W.A. Loans to Railroads

In view of the exhausted status of the public works fund, the Public Works Administration on February 23 announced a policy of hereafter considering for allotment only projects of public bodies and railroads subject to the interstate commerce act. The P.W.A. will continue to make loans to railroads for the purchase of rails and for equipment because of the semi-public nature of the carriers, it announced, and because loans of this character are considered particularly desirable because they are quickly transformed into payrolls and are an important factor in the program to afford relief to the heavy industries. Although the \$3,300,000,000 fund has been allotted, from time to time there remains a small unallotted balance due to revocations, withdrawals and reductions and funds thus returned are at once allotted for expenditure elsewhere.

Public Works Administrator Harold L. Ickes announced on March 1, that he had signed two more contracts for railroad loans totalling \$2,693,000. This puts under contract \$136,889,000 of the \$196,607,800 allotted by the P. W. A. for railroad loans. Contracts covering the balance of the fund are in course of preparation.

The new contracts are for loans of: \$1,481,000 to the receivers of the Wabash for purchasing rail and fastenings and rebuilding freight and passenger cars; \$1,212,000 to the Lehigh & New England for the purchase of 500 new freight cars.

The Lehigh & New England had placed orders for its cars, subject to confirmation after execution of the contract, 100 from the American Car & Foundry Company, 150 from the Pressed Steel Car Company, and 250 from the Magor Car Company.

The P.W.A. on February 23 announced an allotment of \$1,000,000 to the Gulf, Mobile & Northern and an additional allotment of \$331,000 to the Pittsburgh & West Virginia. The proposed loan to the G. M. & N., is for the purchase of 200 freight cars at an estimated cost of approximately \$500,000 and passenger equipment to cost about the same. The passenger equipment, which has not yet been ordered, may be of the new high-speed, streamline type, depending on operating results shown in the next few weeks by trains now being tested on several other roads. The loan to the P. & W. V., which had filed its application with the Interstate Commerce Commission for its approval, is for the purchase of three new heavy freight locomotives of the articulated type, which had been provisionally ordered from the Baldwin Locomotive Works subject to confirmation of a loan contract with the P.W.A. and the approval of the commission.

The Baltimore & Ohio has applied to the Interstate Commerce Commission for authority for the expenditure of \$1,500,000 for which it had applied to the Public Works Administration for a loan, to be used in connection with the purchase of 35,000 tons of rails and track fastenings,

making a total estimated cost of \$2,175,000. The company has also applied for authority to issue its ten-year notes to the P.W.A.

The Lehigh Valley has applied to the Interstate Commerce Commission for approval of the expenditure of \$600,000, for which it has applied to the P.W.A. for a loan, for the purchase of five locomotives and tenders. It has also applied for authority to issue equipment trust certificates for the amount.

A. E. Wallace, receiver of the Wisconsin Central, has applied to the Public Works Administration and to the Interstate Commerce Commission for a loan of \$115,000 for the purchase of 1,752 tons of rails and 135,098 tie plates.

## LOCOMOTIVES

THE SOUTH AFRICAN RAILWAYS & HARBORS, Johannesburg, South Africa, are inquiring for 50 locomotives of the 4-8-2 type. The specifications call for Alfol—aluminum foil insulation—for the insulation of the boilers. G. E. Titren is superintendent of motive power.

THE DELAWARE, LACKAWANNA & WESTERN is inquiring for 20 locomotives of the 4-8-4 type and 5 oil-electric locomotives. As reported in the *Railway Age* of February 24, page 306, these purchases are to be financed by a Public Works Administration loan.

## FREIGHT CARS

THE DELAWARE, LACKAWANNA & WESTERN is inquiring for 500 steel hopper cars in connection with which separate bids are being requested on cars of 50 tons' capacity and on others of 70 tons' capacity.

## MISCELLANEOUS

THE PENNSYLVANIA has placed an order with the National Malleable & Steel Castings Company for its type B trucks, to be used on 250 cars of 50 tons' capacity which the railroad is building in its own shops.

## Construction

NORTHERN PACIFIC.—The Interstate Commerce Commission has authorized this company to construct a branch line from Odair, Wash., northeasterly to the site of the proposed Grand Coulee dam on the Columbia river, 28.5 miles.

RAILROAD OPERATING regulations proposed by organized labor to govern train lengths, factors of safety, convenience, property damage, operating expense, speed, caboose construction and full crews have been ordered investigated by the Illinois Commerce Commission, the taking of testimony to be begun on March 9. This state investigation is the outgrowth of a resolution adopted at Springfield, Ill., on May 15, 1931, but which has lain dormant since that time.

## Supply Trade

The Century Wood Preserving Company, Inc., Boston, Mass., has moved its offices to the Boston Consolidated Gas Building, 250 Stuart street.

S. R. Hamilton, associate editor of the *Railway Age* and other Simmons-Boardman publications, has resigned to accept a position with the National Battery Company, in St. Paul, Minn.

R. G. Russell, vice-president and general manager of the Standard Fence Company, the Pacific Coast subsidiary of the Cyclone Fence Company, Waukegan, Ill., has been elected vice-president and general manager of the latter company.

T. R. Wyles, who is associated with the Armstrong Paint & Varnish Works, Chicago, and who was formerly vice-president and chairman of the board of the Detroit Graphite Company, Detroit, Mich., has been appointed secretary of the Steel Plate Fabricators' Association, which is the trade organization that will be the code authority for that industry under the N. R. A., with headquarters at 1070 Old Colony building, Chicago.

Perry T. Egbert has been appointed manager of the newly formed Railway Diesel Sales division of the American Locomotive Company with headquarters at 30 Church street, New York, effective March 1. Mr. Egbert will have charge of all sales of Diesel-electric locomotives, and of Diesel or gasoline engines for self-propelled rail units and parts therefor. Mr. Egbert started his business career in 1911 as a special apprentice in the Sayre shops of the Lehigh Valley. In 1914 after the completion of this course he occupied various positions with several railroads, leaving the Norfolk & Western in April, 1917, to join the United States Army as an aviator. After being mustered out in July, 1919, he returned to Cornell University, where he received his education, as an instructor in experimental engineering, remaining there until June, 1920, when he entered the employ of the American Locomotive Company in the engineering department at Schenectady, N. Y. Late in the fall of the same year he was transferred to the foreign sales department, and in the spring of 1921 became the representative of the company in China. Returning to the United States in the fall of 1924, Mr. Egbert became attached to both the domestic sales and manufacturing departments of the American Locomotive Company with duties confined to the development of new work. Late in 1929, following the acquisition of the McIntosh & Seymour Corporation, the Diesel Engine division of the American Locomotive Company, he was assigned to the McIntosh & Seymour Corporation as the American Locomotive Company representative for the developing of a Diesel engine particularly suited for railway work. Upon the completion of the design he was given full charge of the developing and servicing of the Alco Diesel locomotives, which position he held until his recent appointment.

Continued on next left-hand page



# MODERN SWITCHERS ARE NEEDED



Switching heavy trains efficiently is as important as hauling

them over the road economically. ● That is why the

Nickel Plate Road has just ordered five modern eight

wheel switchers from Lima Locomotive Works, Incorporated.

● Up-to-date Switchers are needed to keep

pace with progressive road engine programs.



Mr. Egbert, with his new position, will still retain charge of the service bureau.

**Everett Chapman**, who joined **Lukenweld, Inc.**, division of **Lukens Steel Company**, Coatesville, Pa., early in 1930 as director of engineering and research, has been elected vice-president. Lukenweld, Inc., is engaged in the design and manufacture of welded steel assemblies for machinery and equipment. After gradu-



Everett Chapman

ation in 1924 from the University of Michigan, with a master's degree in physics, Mr. Chapman taught electrical engineering at Purdue University, leaving to serve the Lincoln Electric Company of Cleveland, Ohio, on experimental research and development. Since joining Lukenweld, Inc., Mr. Chapman has been credited with responsibility for that organization's engineering achievements in the application of welded steel construction to Diesel engines, presses, planers, lathes, and other machinery and equipment.

#### American Locomotive Company Annual Report for 1933

The American Locomotive Company, for the year ending December 31, 1933, reported a loss of \$1,465,504 after depreciation and all other charges as compared with a 1932 loss of \$4,589,716. The consolidated income account for the past two years follows:

	1933	1932
Net loss after deducting manufacturing, maintenance and administrative expenses .....	\$1,273,900	\$3,145,124
Depreciation on plants and equipment .....	561,894	1,444,592
	\$1,835,794	
Federal Capital Stock taxes .....	53,808	
	\$1,889,602	
Reserve for discount on Canadian exchange restored to income .....	424,098	
Loss for the year....	\$1,465,504	\$4,589,716

The report reveals that the company during 1933 received orders for 12 new locomotives, ten of which were shipped during the year, together with the shipment of one locomotive ordered during the previous year, making a total of 11 locomotives shipped last year. Commenting on prospects for locomotives this year, the report cites the P. W. A. loans to railroads and finds "reason to believe that this

program of the government will be substantially broadened, with resulting benefits to your company." Also, it adds that the company is fully prepared and thoroughly equipped to design and manufacture steam or Diesel streamlined high-speed locomotives for use in fast passenger service.

During last year changes approved by the stockholders at their annual meeting on April 18, 1933, were made in the stated capital of the company. The stated value of the no par common stock was reduced from \$50 per share to \$5 per share, thus creating a capital surplus of \$34,555,500. Of this latter, \$32,023,024 has been applied to make certain reductions in the values of the company's properties and other investments. Taking the figures as of January 1, 1933, the adjustment resulted in a write-down of the net cost of property from \$61,667,761 to \$35,821,516 and of total investments from \$10,449,253 to \$4,272,474. As a result of these revaluations, the report points out, operating income has been relieved of a substantial yearly charge for depreciation on plants and equipment.

The company's current position remains strong. The balance sheet, as of December 31, listed total current assets of \$17,410,203, including \$8,873,167 in cash and marketable securities, as against total current liabilities of \$1,415,133.

#### American Steel Foundries

The annual report of the American Steel Foundries for 1933 shows a loss of \$1,400,640, as compared with a loss of \$1,526,244 in 1932. The surplus account, which amounted to \$8,877,970 on December 31, 1932, was reduced to \$7,203,057, after subtracting the loss for the year, the cost of plant dismantlement and dividends. Current assets amounted to \$10,590,955 while current liabilities were \$810,615, the ratio of quick assets to liabilities being 13.06 to 1. The net working capital is \$9,775,351.

The consolidated income account, in comparison with 1932, follows:

	1933	1932
Loss from operations, after deducting manufacturing, selling and administrative expense, but before provision for depreciation .....	\$ 478,207	\$ 593,492
Add—Depreciation .....	959,169	999,699
Loss from Operations....	\$1,437,376	\$1,593,191
Miscellaneous Income:		
Interest, Discount and Exchange .....	36,174	27,069
Income from Investments .....	121,888	173,425
Less—Miscellaneous Net Charges to Income....	115,215	126,367
Total .....	\$1,394,529	\$1,519,064
Net Earnings of Subsidiary Company appertaining to Outstanding Minority Stockholdings ..	6,111	7,180
Loss carried to Earned Surplus .....	\$1,400,640	\$1,526,244

#### Code for Chilled Car Wheel Industry Approved

Administrator Johnson of the National Recovery Administration on February 17 approved the code of fair competition for the chilled car wheel industry, providing for a normal maximum 40-hour week and 8-hour day and minimum wages of 40 cents an hour with a differential which allows a minimum of 32 cents in the southern states. The code authority is to

consist of four members elected at a meeting of the members of the industry and the president of the Association of Manufacturers of Chilled Car Wheels. In a report to the President General Johnson said of the industry.

"This industry is comprised of 23 concerns operating 47 foundries. It is a capital goods industry and is engaged in the manufacture of chilled iron wheels for locomotives, freight and railroad cars and street railway cars. Being dependent on the railroads for over 90 per cent of its business, it naturally has been severely affected by the depression. Production in 1929 consisted of 2,926,000 wheels, which represented even at that time only 49.6 per cent of capacity. Production in 1933 is estimated at only 1,100,000 wheels, a reduction of 63 per cent from the 1929 volume.

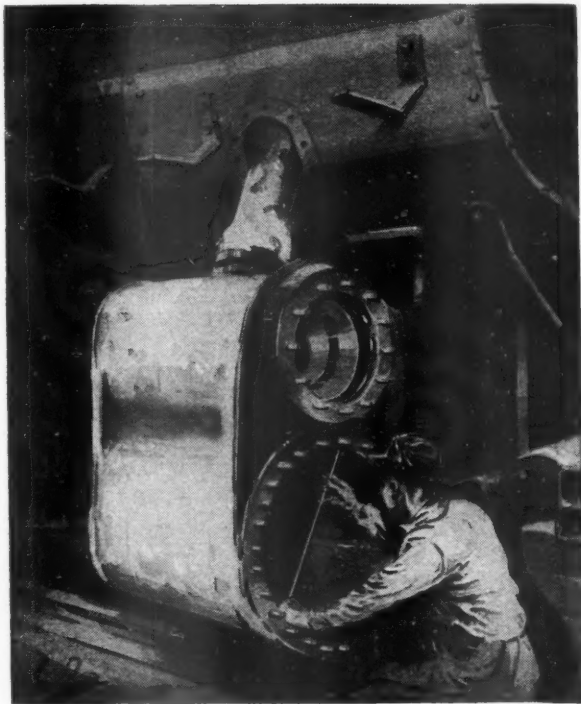
"In 1929 the Industry employed 4,439 persons; this number was decreased 30.5 per cent in 1933 to 3,078. Average weekly payrolls for shop workers, however, are estimated to have been \$109,763 in 1929, but only \$25,727 in 1933, a decrease of 76.7 per cent. This is more clearly illustrated by the fact that in comparing the above two years, it has been shown that the average hours per week per man for shop workers in 1929 were 57 as to 24 in July, 1933, and the average weekly earnings for shop workers in July, 1933, decreased 65 per cent from 1929.

"The adoption of the President's Re-employment Agreement has restored wage rates to the 1929 level, but has not increased the number of employees as the effect was to increase only the number of working days per week. Reemployment in the industry can only be accomplished by a substantial increase in the demand for chilled car wheels. The immediate prospect of the advancement of Public Works Administration funds will favorably affect this industry and should result in increased employment. Also, the market for chilled car wheels is becoming more and more potential in Russia. If the 1929 rate of production is attained, this code will directly increase employment about 28 per cent over the 1929 number of employees.

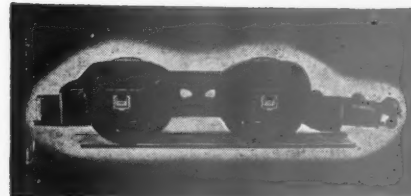
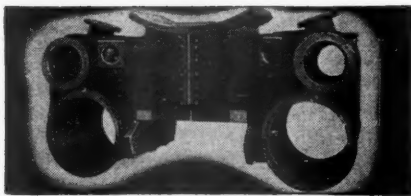
"The minimum rates contained in the Code will increase wage rates 20 per cent over July, 1933, and 2 per cent over July, 1929."

#### Open Bidding Provided for in Car Building Code

Under the N. R. A. code of fair competition for the railway car building industry, approved by Administrator Hugh S. Johnson on February 16, car builders are to have the opportunity to know the prices bid by their competitors for manufacturing or repair work. Article VII of the code provides that in each case wherein two or more employers shall be invited to submit proposals or bids to manufacture or build and sell or to repair any products of the industry, each employer so invited shall within 48 hours after receipt of such invitation notify in writing the secretary of the Railway Car Institute or other agency designated by the code authority of the receipt of such invitation, the name of the customer inviting the proposals or bids,



## Minimum Maintenance Demands *The BOOSTER*



### Smaller Cylinders + *The BOOSTER* FOR PEAK LOADS

#### *Give Most Economical Locomotive Design*

Cut down on piston thrust and you cut down on maintenance.

That's why *The Locomotive Booster* results in sufficient annual maintenance savings to return its original cost in less than a year.

Booster power is only used for peak loads. A smaller main cylinder plus *The Booster* will handle a train that would otherwise require a larger

main cylinder and heavier construction throughout. The added thrust of the bigger pistons brings higher stresses and higher maintenance.

In maintenance economies alone, *The Locomotive Booster* justifies its inclusion in the basic design of your new power.

Franklin has figures to prove this. Ask about them.

# FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK

CHICAGO

MONTREAL



the number and kind of products of the industry and/or repairs with respect to which the proposals or bids are invited, the date, if any, on or by which the proposals or bids are to be submitted and whether or not such employer intends to submit a proposal or bid. Each employer submitting a proposal or bid (a) shall reduce the same to writing, (b) shall state therein, among other things, terms of payment and delivery and the price, including the price of such alternates as shall be required or proposed, which price shall be not less than such employer's estimated cost (as herein-after defined) in respect of the products and/or repairs covered by said proposal or bid, and (c) shall, coincident with the submission of such proposal or bid, send by mail or cause to be delivered a sealed copy of such proposal or bid to the secretary of the institute or other agency designated by the code authority for the purpose.

The employer's estimated cost shall be his or its estimated cost computed according to the method approved by the code authority and administrator. The secretary of the institute or other agency designated shall on the date on or by which the proposals or bids are to be submitted to the customer as stated in the invitation for bids, or upon the receipt by him or it of proposals or bids from all the employers who or which shall have notified him of their intention to submit proposals or bids (whichever shall be earlier) open the sealed copies and send by mail or cause to be delivered to each employer from whom or which he shall have received a copy of a proposal or bid, a copy of every proposal or bid received by him from each other employer in respect of such products and/or repairs. A bidding employer failing or refusing in any case in accordance with the foregoing to submit a written proposal or bid and/or deliver a copy thereof to the said secretary shall be guilty of a violation of the code.

It is also provided that no employer shall sell the products of the industry at a price or on terms or conditions more favorable to the purchaser than the prices, terms and conditions set forth in that proposal or bid from among those of which a copy shall have been sent or delivered to the secretary of the institute or other designated agency, as aforesaid, most favorable to the purchaser, except upon the reopening of bids.

## OBITUARY

**Winfield H. Davis**, eastern representative of the Spring Packing Corporation, Chicago, with headquarters at Cleveland, Ohio, died in that city on February 4 after a month's illness.

## TRADE PUBLICATION

**ENDURO STAINLESS ALLOYS.**—The Republic Steel Corporation, Youngstown, Ohio, has published a 14-page booklet in which are listed and described the many applications of this company's line of Enduro stainless alloys. Typical methods of installing these alloys are also described.

## Financial

**AHUKINI TERMINAL & RAILWAY.—Abandonment.**—This company has applied to the Interstate Commerce Commission for authority to abandon its entire line of 21.4 miles, on the island of Kauai, Hawaii.

**ATCHISON, TOPEKA & SANTA FE.—Abandonment.**—This company has applied to the Interstate Commerce Commission for authority to abandon its line between Elsinore, Calif., and Temecula, 16.46 miles, and that between Medicine Lodge, Kan., and Gerlane, 7.59 miles.

**CHESAPEAKE & OHIO.—P.W.A. Loan.**—The Interstate Commerce Commission has issued a report approving the proposed expenditure of \$16,876,000, the proceeds of a loan from the Public Works Administration, for the purchase of new equipment.

**CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—P. W. A. Loan.**—The Interstate Commerce Commission has approved the proposed expenditure of the proceeds of a P. W. A. loan of \$5,720,000 for the purchase of new equipment and another of \$2,917,383 for the purchase of rails and other work.

**DENVER & RIO GRANDE WESTERN.—Abandonment.**—Examiner R. R. Molster of the Interstate Commerce Commission has recommended in a proposed report that the commission authorize the abandonment of the line from Pagosa, Colo., to Pagosa Junction, 30.85 miles.

**ERIE.—Equipment Trust Certificates.**—The Interstate Commerce Commission has authorized an issue of \$11,282,000 of equipment trust certificates, to be issued by the New York Trust Company, as trustee, and sold at par to the Public Works Administration in connection with the procurement of freight and passenger equipment.

**NEW YORK CENTRAL.—Stockholders' Meeting Called.**—A special meeting of the stockholders of this company has been called by the board of directors to be held at Albany, N. Y., on April 24, to authorize: (a) changing the 7,000,000 authorized shares of capital stock of the company, issued and unissued, into the same number of shares without par value; (b) the substitution, share for share, of 4,992,597-40/100 of such shares without par value for the present issued shares; (c) increasing the number of authorized shares from 7,000,000 to 10,000,000 shares, all without par value; (d) the issue, from time to time, of the resulting unissued 5,007,402-60/100 of such shares without par value in such amounts and on such terms as shall be fixed by the board of directors; (e) fixing the stated capital and amount of capital stock of the company upon and after the proposed change of the stock to shares without par value; (f) amendment of the company's charter to effect such changes and provisions; (g) an increase of \$59,911,100.00 in the indebtedness of the company by the issue of that amount of bonds; and (h) the pledge of collateral to secure such bonds. The board will also seek authority to make these bonds convertible into

capital stock and asks ratification for its action in adopting resolutions providing for (a) the issue of \$59,911,100, ten year 6 percent bonds, to be secured by pledge of collateral convertible into stock at \$40 per share for the first 3 years and \$50 per share for the next 7 years and to be offered, for subscription, to the stockholders of record on March 5.

**PENNSYLVANIA.—P.W.A. Loan.**—The Interstate Commerce Commission has approved the proposed expenditure of \$3,650,000, the proceeds of a loan from the P.W.A., for the purchase of 100,000 tons of rails.

**READING.—Annual Report.**—The 1933 annual report of this company shows net income after interest and other charges of \$6,715,522, an increase of \$2,486,733 over the 1932 figure of \$4,228,789. Selected items from the income statement follow:

	1933	1932	Increase or Decrease
RAILWAY OPERATING REVENUES	\$49,464,052	\$51,806,374	-\$2,342,322
Maintenance of way	2,980,871	4,270,017	-1,289,145
Maintenance of equipment	8,862,251	10,676,671	-1,814,419
Transportation	18,069,846	20,416,988	2,347,143
TOTAL OPERATING EXPENSES	33,148,528	38,804,109	-5,655,641
Operating ratio	67.02	74.90	-7.88
NET REVENUE FROM OPERATIONS	16,315,524	13,002,205	+3,313,319
Railway tax accruals	2,539,491	1,590,521	+948,970
Railway operating income	13,758,568	11,404,622	+2,353,947
Hire of freight cars—Net Dr.	412,876	545,393	+132,517
Joint facility rents—Net	41,944	160,471	-118,527
NET RAILWAY OPERATING INCOME	13,577,068	11,086,616	+2,490,452
Non-operating income	2,775,714	2,760,705	+15,008
GROSS INCOME	16,352,782	13,847,322	+2,505,459
Rent for leased roads	3,255,920	3,258,886	-2,966
Interest on funded debt	5,610,380	5,632,112	-21,732
TOTAL DEDUCTIONS FROM GROSS INCOME	9,637,259	9,618,533	+18,726
NET INCOME	\$6,715,522	\$4,228,789	+\$2,486,733

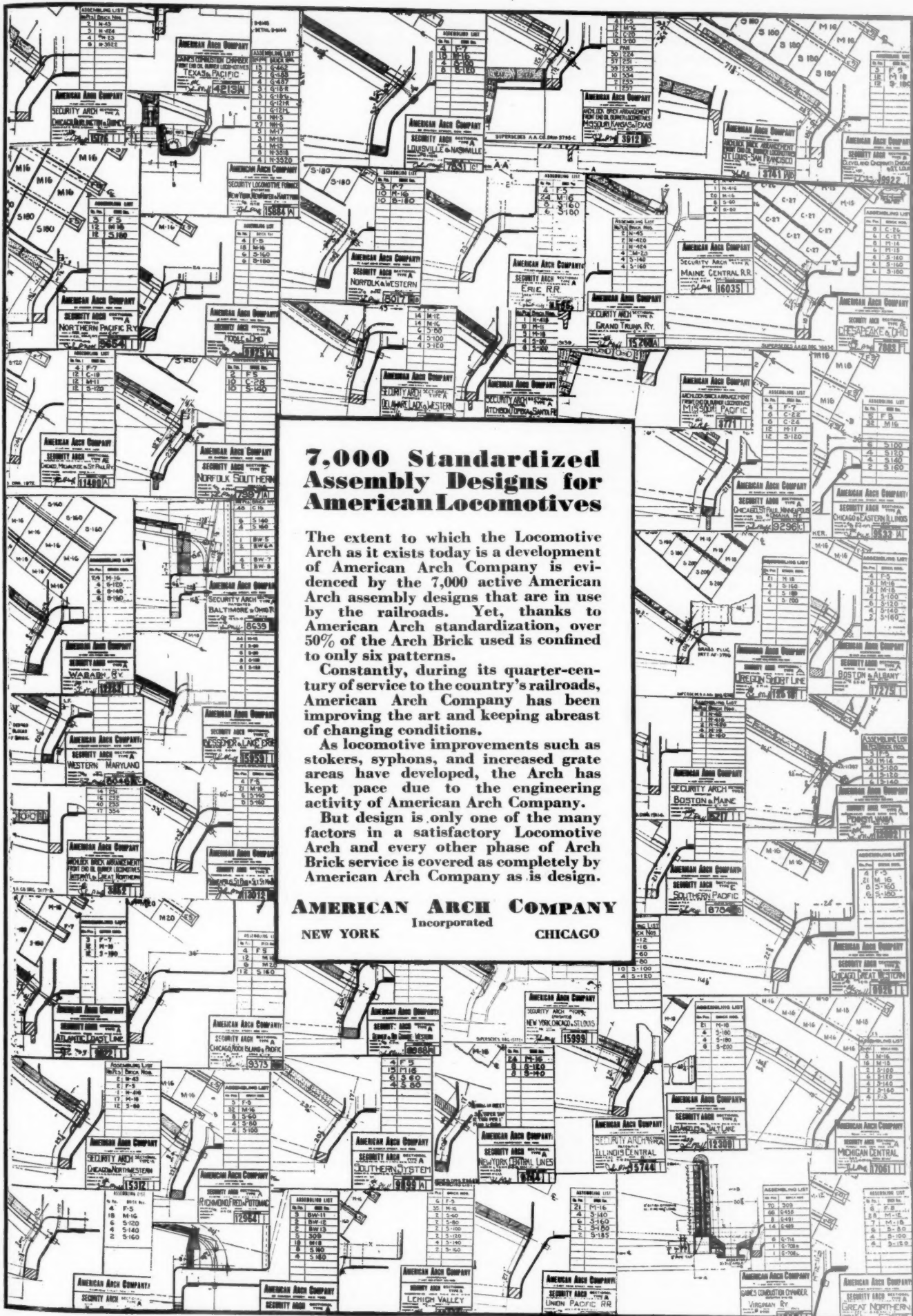
**ST. LOUIS-SAN FRANCISCO.—R. F. C. Loan.**—The trustees have applied to the Reconstruction Finance Corporation for an additional loan of \$6,905,000 for three years for the purpose of retiring bonds of the Kansas City, Memphis & Birmingham maturing March 1. Trustees' certificates were offered as collateral.

**ST. LOUIS-SAN FRANCISCO.—Abandonment.**—The Interstate Commerce Commission has authorized this company and its trustees to abandon a branch extending from Marquette, Mo., to Cape Girardeau, 25.9 miles.

**SOUTHERN PACIFIC.—Abandonment.**—The Interstate Commerce Commission has authorized this company to abandon a portion of its Rumsey (Calif.) branch extending from a point near Capay to Rumsey, 18 miles.

**SOUTHERN PACIFIC LINES.—Preliminary Report.** The preliminary report of these

Continued on next left-hand page



## 7,000 Standardized Assembly Designs for American Locomotives

The extent to which the Locomotive Arch as it exists today is a development of American Arch Company is evidenced by the 7,000 active American Arch assembly designs that are in use by the railroads. Yet, thanks to American Arch standardization, over 50% of the Arch Brick used is confined to only six patterns.

Constantly, during its quarter-century of service to the country's railroads, American Arch Company has been improving the art and keeping abreast of changing conditions.

As locomotive improvements such as stokers, syphons, and increased grate areas have developed, the Arch has kept pace due to the engineering activity of American Arch Company.

But design is only one of the many factors in a satisfactory Locomotive Arch and every other phase of Arch Brick service is covered as completely by American Arch Company as is design.

**AMERICAN ARCH COMPANY**  
Incorporated  
NEW YORK CHICAGO



lines for 1933 shows a net deficit after interest and other charges of \$4,990,931, a decrease of \$788,700 as compared with the 1932 figure of \$5,779,631. Selected items from the income statement follow:

	1933	Increase or Decrease
RAILWAY OPERATING REVENUES	\$129,860,962	-\$12,736,178
Maintenance of way	13,617,585	-3,299,081
Maintenance of equipment	24,463,620	-2,006,997
Transportation	48,610,036	-6,078,844
TOTAL OPERATING EXPENSES	102,374,150	-12,828,810
Operating ratio	.....	.....
NET REVENUE FROM OPERATIONS	27,486,811	+\$2,632
Railway tax accruals	12,435,776	-2,332,637
Equipment and joint facility rents—Net	5,847,860	1,115,789
NET RAILWAY OPERATING INCOME	9,057,074	+3,450,917
Non-operating income	18,389,909	-2,246,045
GROSS INCOME	27,455,987	+1,216,227
Rent for leased roads and miscellaneous rents	880,748	+29,969
Interest on funded debt	29,516,168	-192,183
TOTAL DEDUCTIONS FROM GROSS INCOME	32,446,918	+427,527
NET DEFICIT	\$4,990,931	-\$788,700

**WABASH.—Trackage Rights.**—This road has been authorized by the Interstate Commerce Commission to operate under trackage rights over certain terminal tracks of the Union Pacific in and about Omaha, Neb., and Council Bluffs, Ia.

**WESTERN PACIFIC.—Interest Deferred.**—Mortgage holders of this company have been notified that it would like to defer

all 1934 interest payments until January 1, 1937. Interest due March 1 on first mortgage bonds will not be paid. "The traffic of the railroad," the company's statement said, "has shown progressive improvement for the last six months and the management believes that if the holders of the funded debt co-operate by postponing the collection of 1934 interest the company will be able to meet its other obligations and no judicial reorganization of the property will be necessary."

"The holders of the junior debts on the property have already expressed their willingness to co-operate in such a plan and extensions are now being asked from the holders of the first mortgage bonds. Meanwhile action by the company on payment of the March 1 coupon on the first mortgage bonds will be deferred. Holders of the first mortgage bonds were asked in a letter signed by T. M. Schumacher, executive committee chairman, and Charles Elsey, president, to sign an extension agreement covering the March 1 and September 1 interest payments. There are \$49,290,100 par value of these bonds outstanding. Subordinate to them are debts amounting to \$10,636,539, secured by \$19,000,000 of general and refunding bonds and other collateral.

"All of these junior creditors," the letter to bondholders said, "have already agreed to the postponement of remaining interest payable during 1934, such consents being conditioned upon the co-operation of the holders of at least 75 per cent in amount of the first mortgage bonds and, in the case of the Railroad Credit Corporation,

subject to formal action of their board or executive committee, and in the case of the Reconstruction Finance Corporation, to the necessary approval of the Interstate Commerce Commission, of the extension of the principal of their loan until January 1, 1937.

"The company has an unfunded debt to the Western Pacific Railroad Corporation, its parent company, amounting to \$5,634,722, as to which an extension of 1934 interest is assured. Aside from a total of \$4,118,464 in equipment trust obligations, the company has no other funded debt, nor has it any bank loans or other borrowings."

#### Average Prices of Stocks and of Bonds

	Feb. 27	Last week	Last year
Average price of 20 representative railway stocks..	45.62	49.00	22.68
Average price of 20 representative railway bonds..	77.34	78.30	53.66

#### Dividends Declared

Chesapeake & Ohio.—Common, 70c, quarterly, payable April 2 to holders of record March 8; Preferred, \$3.25, semi-annually, payable July 1 to holders of record June 8.

Columbus & Xenia.—\$1.10, payable March 10 to holders of record February 26.

Erie & Pittsburgh.—87½c, payable March 10 to holders of record February 28.

Ft. Wayne & Jackson.—5½ Per Cent Preferred, \$2.75, semi-annually, payable March 1 to holders of record February 20.

Germantown & Norristown.—\$1.50, payable March 5 to holders of record February 20.

Little Miami.—Special Guaranteed, 50c quarterly; Original Guaranteed, \$1.00, quarterly, both payable March 10 to holders of record February 24.

New York, Lackawanna & Western.—\$1.25, quarterly, payable April 2 to holders of record March 14.

Reading.—2nd Preferred, 50c, quarterly, payable April 12 to holders of record March 22.

Warren.—\$1.75, semi-annually, payable April 16 to holders of record April 4.

### Net Income, Class I Railways—December and Twelve Months

	Net Income			Net Income	
	1933	1932		1933	1932
Akron, Canton & Youngstown.....Dec.	\$9,596	\$4,663	Chicago & Eastern Illinois.....Dec.	82,462	245,090
12 mos.	118,327	57,598	12 mos.	2,020,504	3,411,419
Alton.....Dec.	142,259	112,363	Chicago & Illinois Midland.....Dec.	66,876	8,363
12 mos.	43,251	1,259,705	12 mos.	321,224	434,578
Alton & Southern.....Dec.	27,209	14,494	Chicago & North Western.....Dec.	840,939	640,365
12 mos.	282,789	222,116	12 mos.	7,875,419	11,216,820
Atchison, Topeka & Santa Fe.....Dec.	193,408	356,636	Chicago, Burlington & Quincy.....Dec.	755,461	44,217
12 mos.	3,698,671	7,545,008	12 mos.	5,598,024	1,502,816
Atlanta & West Point.....Dec.	21,662	16,934	Chicago Great Western.....Dec.	116,913	196,769
12 mos.	209,900	296,668	12 mos.	514,825	1,346,905
Western of Alabama.....Dec.	1,545	21,355	Chicago, Indianapolis & Louisville.....Dec.	21,573	25,639
12 mos.	113,328	172,656	12 mos.	1,514,467	1,594,813
Atlanta, Birmingham & Coast.....Dec.	14,432	38,116	Chicago, Mil., St. Paul & Pacific.....Dec.	1,543,702	1,558,992
12 mos.	223,375	801,899	12 mos.	14,412,141	23,269,678
Atlantic Coast Line.....Dec.	392,781	781,863	Chicago River & Indiana.....Dec.	43,510	79,568
12 mos.	2,385,788	6,685,229	12 mos.	715,728	488,773
Charleston & Western Carolina.....Dec.	16,172	4,911	Chicago, Rock Island & Pacific.....Dec.	1,411,451	750,133
12 mos.	152,911	100,549	12 mos.	9,998,794	9,057,637
Baltimore & Ohio.....Dec.	320,836	638,472	Chicago, Rock Island & Gulf.....Dec.	243,825	255,519
12 mos.	204,772	6,334,979	12 mos.	1,604,052	899,163
Baltimore & Ohio Chicago Term.....Dec.	.....	.....	12 mos.	133,559	72,838
12 mos.	.....	.....	Cincinnati Union Terminal.....Dec.	1,060,225	2,864,234
Staten Island Rapid Transit.....Dec.	.....	.....	12 mos.	185,493	.....
12 mos.	.....	.....	Clinchfield Railroad.....Dec.	2,259,038	1,583,806
Bangor & Aroostook.....Dec.	121,662	54,132	12 mos.	651,853	.....
12 mos.	993,576	701,493	Colorado & Southern.....Dec.	27,826	29,773
Belt Railway Company of Chicago.....Dec.	4,627	15,600	12 mos.	943,390	1,269,824
12 mos.	48,839	238,175	Fort Worth & Denver City.....Dec.	64,429	83,895
Bessemer & Lake Erie.....Dec.	117,402	280,316	12 mos.	412,812	649,931
12 mos.	1,373,623	1,920,293	Columbus & Greenville.....Dec.	16,865	30,271
Boston & Maine.....Dec.	38,494	418,304	12 mos.	85,492	85,659
12 mos.	321,571	800,660	Conemaugh & Black Lick.....Dec.	9,257	15,640
Brooklyn Eastern District Term.....Dec.	16,043	26,753	12 mos.	7,205	236,000
12 mos.	71,825	142,300	Delaware & Hudson.....Dec.	268,783	336,781
Burlington-Rock Island.....Dec.	67,424	75,073	12 mos.	3,699,772	4,477,591
12 mos.	753,097	855,735	Delaware, Lackawanna & Western.....Dec.	230,783	47,392
Cambria & Indiana.....Dec.	81,256	102,736	12 mos.	2,993,862	2,542,447
12 mos.	926,517	819,128	Denver & Rio Grande Western.....Dec.	97,413	81,438
Canadian Pacific Lines in Maine.....Dec.	.....	270	12 mos.	2,138,953	2,584,210
12 mos.	.....	270	Denver & Salt Lake.....Dec.	249,524	271,168
Canadian Pacific Lines in Vermont.....Dec.	.....	.....	12 mos.	4,146	3,946
12 mos.	208,321	337,823	Detroit & Mackinac.....Dec.	11,723	14,406
Central of Georgia.....Dec.	2,669,565	3,341,676	12 mos.	75,012	16,191
12 mos.	330,341	260,155	Detroit & Toledo Shore Line.....Dec.	96,769	66,409
Central New Jersey.....Dec.	2,309,738	1,828,083	12 mos.	503,599	271,319
12 mos.	78,152	34,857	Detroit Terminal.....Dec.	9,419	12,051
Central Vermont.....Dec.	875,468	944,053	12 mos.	36,625	44,304
12 mos.	2,071,204	2,053,589	Detroit, Toledo & Ironton.....Dec.	62,463	11,200
Chesapeake & Ohio.....Dec.	28,239,810	23,527,755	12 mos.	342,361	299,498

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# NO SUPERHEATER WORK for the Roundhouse

*When the superheater is  
properly maintained  
at the backshop*



**Unserviceable  
Unit**



**Remanufactured  
Unit**



Superheater units are remanufactured by the same methods used in making new units. Here is shown the ends of unit pipes being heated preparatory to being forged together to form return bends.



The life of superheater units is as long as that of the firebox . . . but no longer. Hence, when locomotives are in the backshop for renewal of fireboxes, replacement of other parts, and heavy repairs . . . then is the time that the superheater units should be renewed.

Failure to give superheater units proper attention in the backshop just increases roundhouse upkeep expense, with the added uncertainty of performance and lowered efficiency of the superheater, which results from makeshift repairs.

You can avoid all this by having your unserviceable superheater units remanufactured. Locomotives with new or remanufactured units, properly applied, will run from shopping to shopping without superheater failure or maintenance expense.

## THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, Inc.

60 East 42nd Street  
NEW YORK



Peoples Gas Building  
CHICAGO

A-846

Canada: The Superheater Company, Limited, Montreal

Superheaters - Feed Water Heaters - Exhaust Steam Injectors - Superheated Steam Pyrometers - American Throttles



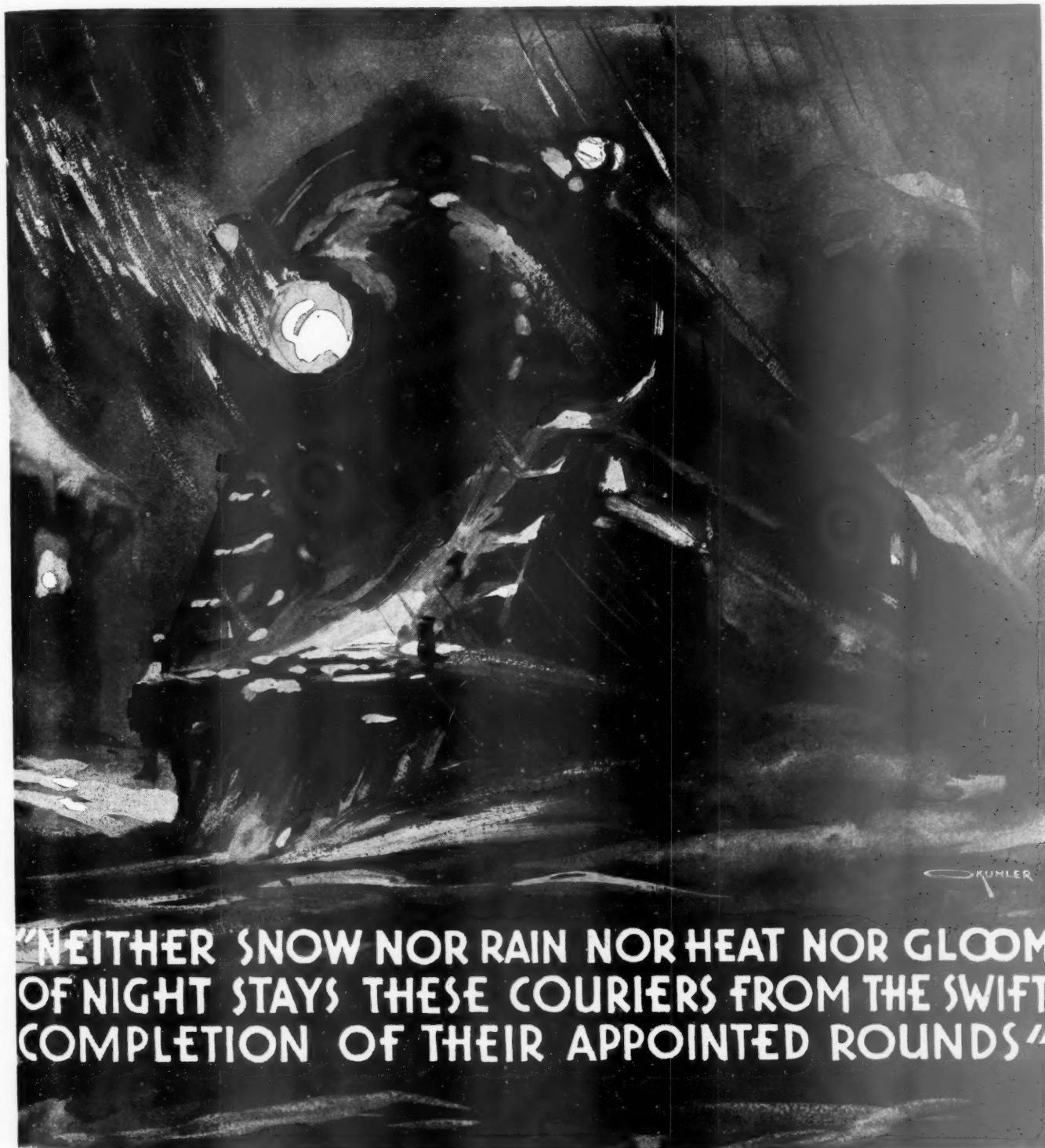
## Net Income, Class I Railways—December and Twelve Months (Continued)

	Net Income			Net Income	
	1933	1932		1933	1932
Duluth, Missabe & Northern.....Dec.	55,333	288,383	Indiana Harbor Belt.....Dec.	72,009	85,821
Duluth, Winnipeg & Pacific.....Dec.	10,684,914	2,956,212	Pittsburgh & Lake Erie.....Dec.	1,419,674	1,053,843
Elgin, Joliet & Eastern.....Dec.	516,968	548,931	New York, Chicago & St. Louis.....Dec.	292,598	192,214
Erie Railroad.....Dec.	106,786	10,368	New York, New Haven & Hartford.....Dec.	2,565,250	1,367,882
Chicago & Erie.....Dec.	6,184	157,269	New York Connecting.....Dec.	120,363	308,112
New Jersey & New York.....Dec.	532,148	2,441,907	Norfolk & Western.....Dec.	1,205,636	4,410,434
N. Y., Susquehanna & Western.....Dec.	245,455	736,041	Norfolk Southern.....Dec.	406,225	101,096
Florida East Coast.....Dec.	531,529	3,142,997	Norfolk Pacific.....Dec.	4,853,832	393,047
Fort Smith & Western.....Dec.	28,835	43,694	Northern Pacific.....Dec.	66,036	40,436
Galveston Wharf.....Dec.	380,728	309,128	Northwestern Pacific.....Dec.	11,875	181,745
Georgia Railroad.....Dec.	2,978	27,914	Oklahoma City-Ada-Atoka.....Dec.	29,043	93,191
Georgia & Florida.....Dec.	416,881	242,476	Oklahoma City-Ada-Atoka.....Dec.	372,583	777,593
Grand Trunk Western.....Dec.	166,122	151,045	Pennsylvania Railroad.....Dec.	2,100,780	2,085,661
Green Bay & Western.....Dec.	3,185,635	3,316,630	Long Island.....Dec.	22,479,409	16,984,376
Gulf & Ship Island.....Dec.	22,034	15,637	Peoria & Pekin Union.....Dec.	6,004	78,268
Gulf, Mobile & Northern.....Dec.	284,814	167,942	Pere Marquette.....Dec.	522,114	1,103,406
Illinois Central.....Dec.	21,838	91,738	Pittsburg & Shawmut.....Dec.	6,652,932	4,869,231
Illinois Central System.....Dec.	25,089	196,526	Pittsburg & West Virginia.....Dec.	303,981	1,991,407
Illinois Terminal.....Dec.	34,010	52,700	Pittsburg, Shawmut & Northern.....Dec.	135,617	159,739
Kansas City Southern.....Dec.	144,328	456,125	Reading.....Dec.	1,624,504	1,629,328
Kansas City Southern.....Dec.	59,658	45,744	Richmond, Fredericksb'g & Potomac.....Dec.	13,248	20,021
Kansas City Southern.....Dec.	618,310	774,512	Rutland.....Dec.	108,640	121,122
Kansas City Southern.....Dec.	162,734	294,487	St. Louis San Francisco.....Dec.	122,651	755,417
Kansas City Southern.....Dec.	3,866,678	5,404,179	St. Louis San Francisco.....Dec.	19,281,170	13,573,536
Kansas City Southern.....Dec.	1,236,547	1,427,488	St. Louis San Francisco.....Dec.	320,396	127,535
Kansas City Southern.....Dec.	27,739	89,619	St. Louis San Francisco.....Dec.	2,243,258	2,999,648
Kansas City Southern.....Dec.	2,177,450	1,077,633	St. Louis San Francisco.....Dec.	38,853	1,390
Kansas City Southern.....Dec.	3,187,760	13,405,439	St. Louis San Francisco.....Dec.	141,225	87,947
Kansas City Southern.....Dec.	23,556	36,883	St. Louis San Francisco.....Dec.	21,230	166,834
Kansas City Southern.....Dec.	93,733	112,277	St. Louis San Francisco.....Dec.	1,599,471	3,044,611
Kansas City Southern.....Dec.	6,662	36,992	St. Louis San Francisco.....Dec.	338,362	11,261
Kansas City Southern.....Dec.	235,147	356,433	St. Louis San Francisco.....Dec.	144,613	180,485
Kansas City Southern.....Dec.	17,134	99,870	St. Louis San Francisco.....Dec.	26,753	18,417
Kansas City Southern.....Dec.	75,152	705,094	St. Louis San Francisco.....Dec.	106,107	433,529
Kansas City Southern.....Dec.	809,587	647,072	St. Louis San Francisco.....Dec.	18,208	25,434
Kansas City Southern.....Dec.	1,377,874	1,160,689	St. Louis San Francisco.....Dec.	26,826	163,739
Kansas City Southern.....Dec.	72,755	308,525	St. Louis San Francisco.....Dec.	513,441	519,449
Kansas City Southern.....Dec.	1,264,013	2,385,885	St. Louis San Francisco.....Dec.	6,715,523	4,228,789
Kansas City Southern.....Dec.	9,462	357,741	St. Louis San Francisco.....Dec.	346,496	72,352
Kansas City Southern.....Dec.	260,853	679,956	St. Louis San Francisco.....Dec.	1,999,642	669,600
Kansas City Southern.....Dec.	162,404	160,898	St. Louis San Francisco.....Dec.	20,830	183,250
Kansas City Southern.....Dec.	1,244,546	1,380,761	St. Louis San Francisco.....Dec.	292,320	389,341
Kansas City Southern.....Dec.	20,942	15,037	St. Louis San Francisco.....Dec.	8,995	12,565
Kansas City Southern.....Dec.	303,130	266,120	St. Louis San Francisco.....Dec.	70,328	41,460
Kansas City Southern.....Dec.	23,043	34,935	St. Louis San Francisco.....Dec.	943,266	1,012,366
Kansas City Southern.....Dec.	796,993	286,852	St. Louis San Francisco.....Dec.	9,295,704	8,980,117
Kansas City Southern.....Dec.	145,879	70,945	St. Louis San Francisco.....Dec.	25,309	38,063
Kansas City Southern.....Dec.	7,921	20,234	St. Louis San Francisco.....Dec.	390,954	403,567
Kansas City Southern.....Dec.	214,941	181,593	St. Louis San Francisco.....Dec.	50,606	65,913
Kansas City Southern.....Dec.	43,987	103,843	St. Louis San Francisco.....Dec.	492,378	613,783
Kansas City Southern.....Dec.	300,338	432,041	St. Louis San Francisco.....Dec.	156,893	347,086
Kansas City Southern.....Dec.	252,571	54,588	St. Louis San Francisco.....Dec.	1,536,894	3,471,325
Kansas City Southern.....Dec.	2,775,833	3,933,043	St. Louis San Francisco.....Dec.	12,153	243,022
Kansas City Southern.....Dec.	2,739	4,226	St. Louis San Francisco.....Dec.	143,124	1,110,350
Kansas City Southern.....Dec.	151,187	27,525	St. Louis San Francisco.....Dec.	443,953	636,525
Kansas City Southern.....Dec.	3,602	21,796	St. Louis San Francisco.....Dec.	6,530,504	9,528,174
Kansas City Southern.....Dec.	76,723	102,995	St. Louis San Francisco.....Dec.	712,096	317,470
Kansas City Southern.....Dec.	67,028	889,982	St. Louis San Francisco.....Dec.	710,320	10,955,562
Kansas City Southern.....Dec.	1,795,716	2,108,875	St. Louis San Francisco.....Dec.	331,168	67,301
Kansas City Southern.....Dec.	51,196	13,531	St. Louis San Francisco.....Dec.	484,466	408,499
Kansas City Southern.....Dec.	19,285	416,125	St. Louis San Francisco.....Dec.	108,337	75,762
Kansas City Southern.....Dec.	9,560	2,722	St. Louis San Francisco.....Dec.	1,863,173	296,546
Kansas City Southern.....Dec.	57,539	26,925	St. Louis San Francisco.....Dec.	24,953	25,545
Kansas City Southern.....Dec.	197,527	289,773	St. Louis San Francisco.....Dec.	277,286	109,266
Kansas City Southern.....Dec.	2,745,626	3,410,486	St. Louis San Francisco.....Dec.	9,824	40,126
Kansas City Southern.....Dec.	325,146	450,584	St. Louis San Francisco.....Dec.	544,519	758,239
Kansas City Southern.....Dec.	4,821,146	5,516,464	St. Louis San Francisco.....Dec.	10,556	11,483
Kansas City Southern.....Dec.	46,300	180,580	St. Louis San Francisco.....Dec.	100,125	168,367
Kansas City Southern.....Dec.	991,489	1,493,525	St. Louis San Francisco.....Dec.	1,699,588	1,216,692
Kansas City Southern.....Dec.	24,245	31,624	St. Louis San Francisco.....Dec.	4,990,931	5,779,631
Kansas City Southern.....Dec.	365,676	392,114	St. Louis San Francisco.....Dec.	111,011	726,761
Kansas City Southern.....Dec.	12,217	19,510	St. Louis San Francisco.....Dec.	2,334,903	3,630,652
Kansas City Southern.....Dec.	137,974	178,302	St. Louis San Francisco.....Dec.	8,960	10,671
Kansas City Southern.....Dec.	18,813	46,420	St. Louis San Francisco.....Dec.	37,552	82,250
Kansas City Southern.....Dec.	199,323	382,846	St. Louis San Francisco.....Dec.	670	188,013
Kansas City Southern.....Dec.	2,311	15,649	St. Louis San Francisco.....Dec.	6,690	1,570,005
Kansas City Southern.....Dec.	103,046	131,139	St. Louis San Francisco.....Dec.	308,366	230,413
Kansas City Southern.....Dec.	152,616	80,374	St. Louis San Francisco.....Dec.	103,758	92,710
Kansas City Southern.....Dec.	1,516,998	632,416	St. Louis San Francisco.....Dec.	16,641	5,842
Kansas City Southern.....Dec.	1,438,012	1,477,503	St. Louis San Francisco.....Dec.	287,486	234,871
Kansas City Southern.....Dec.	13,054,477	10,260,861	St. Louis San Francisco.....Dec.	5,232	16,482
Kansas City Southern.....Dec.	1,113,983	1,206,812	St. Louis San Francisco.....Dec.	154,373	11,474
Kansas City Southern.....Dec.	1,285,393	2,427,332	St. Louis San Francisco.....Dec.	9,693	12,099
Kansas City Southern.....Dec.	18,396	30,113	St. Louis San Francisco.....Dec.	52,160	70,217
Kansas City Southern.....Dec.	338,265	327,045	St. Louis San Francisco.....Dec.	98,449	185,029
Kansas City Southern.....Dec.	124,403	160,775	St. Louis San Francisco.....Dec.	422,788	1,865,193
Kansas City Southern.....Dec.	1,549,892	2,237,427	St. Louis San Francisco.....Dec.	5,535,437	7,027,331
Kansas City Southern.....Dec.	35,237	16,571	St. Louis San Francisco.....Dec.	25,182,284	26,177,262
Kansas City Southern.....Dec.	318,331	311,629	St. Louis San Francisco.....Dec.	113,737	127,349
Kansas City Southern.....Dec.	2,396	35,349	St. Louis San Francisco.....Dec.	1,088,282	224,073
Kansas City Southern.....Dec.	110,176	300,868	St. Louis San Francisco.....Dec.	323,715	395,674
Kansas City Southern.....Dec.	27,444	55,028	St. Louis San Francisco.....Dec.	3,775,804	4,775,856
Kansas City Southern.....Dec.	729,808	673,451	St. Louis San Francisco.....Dec.	270,204	396,839
Kansas City Southern.....Dec.	27,140	94,167	St. Louis San Francisco.....Dec.	985,432	1,059,449
Kansas City Southern.....Dec.	292,326	434,185	St. Louis San Francisco.....Dec.	56,055	27,714
Kansas City Southern.....Dec.	1,642	1,790	St. Louis San Francisco.....Dec.	530,768	293,539
Kansas City Southern.....Dec.	21,669	5,636	St. Louis San Francisco.....Dec.	6,687	62,509
Kansas City Southern.....Dec.	31,509	6,855	St. Louis San Francisco.....Dec.	144,093	36,518
Kansas City Southern.....Dec.	180,734	156,120	St. Louis San Francisco.....Dec.	361,906	390,675
Kansas City Southern.....Dec.	4,634	13,703	St. Louis San Francisco.....Dec.	2,956,652	2,074,399
Kansas City Southern.....Dec.	403	6,441	St. Louis San Francisco.....Dec.	166,814	282,563
Kansas City Southern.....Dec.	378,609	1,104,411	St. Louis San Francisco.....Dec.	4,823,058	6,673,695
Kansas City Southern.....Dec.	5,412,514	18,256,400	St. Louis San Francisco.....Dec.	26,221	51,064
			St. Louis San Francisco.....Dec.	226,032	411,763
			St. Louis San Francisco.....Dec.	152,054	124,910
			St. Louis San Francisco.....Dec.	936,051	612,893
			St. Louis San Francisco.....Dec.	152,502	323,240
			St. Louis San Francisco.....Dec.	2,087,808	2,230,177
			St. Louis San Francisco.....Dec.	11,173	170,087
			St. Louis San Francisco.....Dec.	1,065,050	435,084
			St. Louis San Francisco.....Dec.	3,364	17,720
			St. Louis San Francisco.....Dec.	44,765	56,639

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AMERICAN LOCOMOTIVE COMPANY

*To the*  
STEAM LOCOMOTIVE



"NEITHER SNOW NOR RAIN NOR HEAT NOR GLOOM  
OF NIGHT STAYS THESE COURIERS FROM THE SWIFT  
COMPLETION OF THEIR APPOINTED ROUNDS"

30 CHURCH STREET NEW YORK N.Y.

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## Railway Officers

### EXECUTIVE

The following changes in the executive personnel of the Railway Express Agency, Inc., effective March 1, have been announced by President L. O. Head: **Charles W. Robie**, vice-president in charge of operations, Eastern departments, has retired from active service at his own request. **W. A. Benson**, executive vice-president at New York, has been appointed vice-president, Western departments, with headquarters at San Francisco, Cal., replacing **C. R. Graham**, who will succeed Mr. Robie as vice-president in charge of operations, Eastern departments at New York. **Arnold V. Julier**, assistant to vice-president in charge of traffic, has been appointed executive assistant, in the president's office, with headquarters as before at New York.

Charles W. Robie started his career in 1885 in an express office at Plymouth, N. H.



Charles W. Robie

He later became clerk in the express office at Lowell, Mass., and subsequently went to Boston to serve in a similar capacity at the headquarters of the superintendent of the Massachusetts division. A few years later he was appointed route agent at Springfield. After serving for five years in the latter position, Mr. Robie was appointed division superintendent. The scope of his authority was enlarged to cover the entire New England department ten years later and he was appointed assistant general manager. In 1914 Mr. Robie became manager of that department for the American Express Company. In July, 1918, when the services of this company and other express companies were unified during the World War period under the American Railway Express Company, the New England operations were continued as a single department and Mr. Robie was appointed general manager. In December, 1923, following the election of Robert E. M. Cowie as president of the latter company, Mr. Robie was appointed vice-president of the Eastern departments, with headquarters at New York. Mr. Robie's retirement from this position on March 1

rounds out his tenth year in the latter post, concluding an active career of almost half a century.

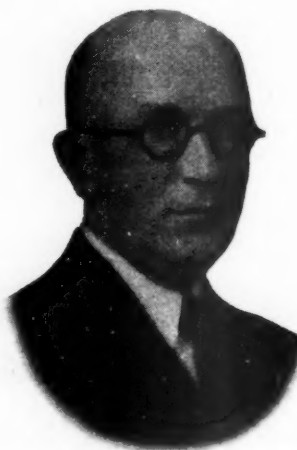
W. A. Benson began his career in 1905



W. A. Benson

as a joint railroad and express agent on the Milwaukee division of the Chicago & North Western. He subsequently served with the Chicago & Milwaukee Electric, the Chicago & Alton, the Chicago Great Western and the engineering concern of A. L. Drum & Company. Mr. Benson entered the express service in April, 1912, as chief clerk in the office of the comptroller at Chicago. He later served as assistant to the vice-president in charge of accounts and then as assistant to the president. For the past four years Mr. Benson has been executive vice-president of the Railway Express Agency.

C. R. Graham began his express career approximately 40 years ago as office boy for the Northern Pacific Express Company at St. Paul, Minn. He subsequently served in various positions with that company until he became chief clerk to the superintendent at Portland, Ore. In 1906 he entered the employ of Wells Fargo & Company. After a varied experience in



C. R. Graham

both operating and traffic matters, Mr. Graham became general manager of the American Railway Express Company upon its formation in 1918, continuing in that position when this company was succeeded by the Railway Express Agency. In April, 1932, Mr. Graham became vice-president,

in charge of operations, Western department, the position he held at the time of his recent appointment.

Arnold V. Julier entered the service of the American Express Company as clerk in 1910, after engaging in railroad service for approximately six years. He later became agent in the New England department. In 1912 Mr. Julier was appointed transportation agent at Baltimore, Md., later being transferred to Philadelphia, Pa. In 1915 he became agent at Communipaw terminal, Jersey City, New York City department, and then served in the same position at Grand Central terminal in Manhattan. He was appointed acting superintendent at Albany in July, 1919, and subsequently served as superintendent at Scranton, Pa. Mr. Julier became assistant to the vice-president in charge of traffic at New York in 1922, his particular as-



Arnold V. Julier

signment being the division of business under Article XVIII of the Express Operations Agreement.

### OPERATING

**G. B. Goodloe**, superintendent of the Houston division of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., has retired under the pension rules of the company on account of ill health. **K. C. Marshall**, assistant superintendent at that point will succeed Mr. Goodloe as superintendent of the division, with the same headquarters. **T. M. Spence**, assistant superintendent, with headquarters at Victoria, Tex., has been transferred to Houston in the same capacity. **J. D. Kinsler**, trainmaster at Austin, Tex., has been appointed assistant superintendent at Victoria, to succeed Mr. Spence, and he in turn will be succeeded by **T. S. Stewart**.

### TRAFFIC

Effective March 1, the headquarters of **O. N. Spain**, general passenger agent of the Chesapeake & Ohio, were moved from Richmond, Va., to the Transportation building, Washington, D. C. Mr. Spain will have full charge of all solicitation activities with all passenger agents reporting directly to him. **G. Coombs**, assistant general passenger agent at Cincinnati, Ohio, has been transferred to Richmond in

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# UNBALANCED FORCES

## TEAR AWAY AT ENGINE BOLTS



Engine bolt material is subjected to tremendous strains due to the unbalanced forces that work from one side of the locomotive to another. » » » Engine bolt steel must refuse to give a fraction of an

inch or else cracks develop from the pounding which soon has the locomotive in the shop. » » » Years ago, the metallurgists of Republic Steel Corporation began their research for a steel that would withstand repeated shocks; possess higher tensile strength and that would resist fatigue better than the old steels but still retain the uniformity of composition that makes steel desired over wrought iron. » » » From years of patient development in the country's largest metallurgical laboratories has come Agathon Engine Bolt Steel—a steel that possesses the desired fatigue resistance, ease of machining and ductility. » » » So well does this steel supply the demands for a better engine bolt material that many large railroads have standardized on it. » » » »

Toncan Iron Boiler Tubes, Pipe, Plates, Culverts, Rives, Tender Plates and Firebox Sheets • Sheets and Strip for special railroad purposes • Agathon Alloy Steels for Locomotive Parts • Agathon Engine Bolt Steel • Agathon Iron for pins and bushings • Agathon Staybolt Iron • Climax Steel Staybolts • Upson Bolts and Nuts • Track Material, Maney Guard Rail Assemblies • Enduro Stainless Steel for dining car equipment, for refrigeration cars and for firebox sheets • Agathon Nickel Forging Steel.

CENTRAL ALLOY DIVISION, MASSILLON, OHIO

**REPUBLIC STEEL**  
C O R P O R A T I O N  
GENERAL OFFICES  YOUNGSTOWN, OHIO





the same capacity and **George W. Christoffel**, traveling passenger agent at New York, has been transferred to Washington, D. C., where he will manage the newly created Bureau of Conventions and Tours.

The following changes in the traffic department of the Pennsylvania became effective on March 1: **R. J. Wood**, division freight agent, with headquarters in Cleveland, has been promoted to general freight agent at Chicago. **W. P. Veit**, assistant general freight agent, has been advanced to the position of general freight agent, with headquarters as before at Chicago. **E. B. Hankey**, division freight agent, has been appointed assistant general freight agent, with headquarters at Pittsburgh as heretofore. **J. A. Sonnhalter**, division freight agent, with headquarters at Youngstown, Ohio, has been transferred in the same capacity to Cleveland, replacing Mr. Wood. **E. W. Saville**, foreign freight agent at Chicago, has been appointed division freight agent at Youngstown, to succeed Mr. Sonnhalter. **G. R. Richardson**, division freight agent at Wilmington, Del., has been appointed assistant general freight agent at Philadelphia, Pa. **E. D. Zeigler**, district freight agent, with headquarters at Wheeling, W. Va., has been promoted to division freight agent at Wilmington, replacing Mr. Richardson. **F. G. Schoettler**, division freight agent at Cincinnati, has been transferred in the same capacity to Ft. Wayne, Ind., and will in turn be replaced by **E. W. Fisher**, formerly commerce agent at Philadelphia. **T. M. Goldsborough**, division passenger agent at Columbus, Ohio, has been transferred in the same position to Buffalo, N. Y. **F. E. Penn, Jr.**, district passenger agent at Dayton, Ohio, has been promoted to division passenger agent at Columbus, to succeed Mr. Goldsborough.

## PURCHASES AND STORES

**William S. Morehead**, assistant general storekeeper of the Illinois Central, has been promoted to general storekeeper, with headquarters as before at Chicago, to succeed **William Davidson**, deceased.

## MECHANICAL

**Clyde B. Hitch**, whose appointment as assistant superintendent motive power of the Chesapeake & Ohio, with headquarters at Huntington, W. Va., was reported in the *Railway Age* of February 17, was born November 4, 1882, at Terre Haute, Ind. After a high school education he entered railway service as a machinist apprentice on the Vandalia Railroad (now part of the P. R. R.) at Terre Haute, completing his apprenticeship in 1900. He later served as machinist on the Pere Marquette, the Louisville & Nashville, the Iron Mountain (now part of Missouri Pacific), the Southern and the Chicago & Eastern Illinois. Mr. Hitch entered the service of the Chesapeake & Ohio in 1902 as machinist at Lexington, Ky. He subsequently served from 1910 to 1913 as general foreman of the Covington shops at Covington, Ky., and then in a similar position at the Hinton, W. Va., shops until 1920. From the latter

date until 1923, Mr. Hitch was master mechanic at Clifton Forge, Va., then being transferred to the Cincinnati and Northern divisions in the same capacity. He next served as master mechanic of the Cincinnati, Northern and Russell divisions, with headquarters at Russell, Ky., and in May, 1930, he was appointed general master mechanic at Huntington, W. Va., the position he held at the time of his recent promotion.

## OBITUARY

**Harry A. Buck**, general agent, passenger department, for the Union Pacific at San Francisco, Cal., died on February 21, at the age of 65 years.

**Evan H. Wade**, who retired in 1927 as assistant superintendent of motive power of the Chicago & North Western, died on February 16 at the West Suburban hospital at Chicago at the age of 64 years. Mr. Wade was born on August 18, 1869, at Chicago, and first entered railway service in 1883 with the North Western, rising through various positions in the mechanical department to that of assistant superintendent of motive power in 1919.

**Fred Wild**, formerly vice-president of the Denver & Rio Grande Western, died on February 17 at his home at Denver, Colo. Mr. Wild was born at Kenosha, Wis., and entered railway service in 1880 in a clerical capacity with the Chicago, Milwaukee, St. Paul & Pacific, then going with the Wabash in a similar capacity. In 1883, Mr. Wild was appointed assistant general freight agent at Denver for the Denver, Texas & Ft. Worth (now part of the Colorado & Southern). In 1890 he went with the Union Pacific at Denver as assistant general freight agent and later served as general freight agent at the same point for the Union Pacific, Denver & Gulf (now also part of the C. & S.). In 1893, he was appointed general sales agent at Denver for the Colorado Fuel & Iron Company and in 1899 he went with the Denver & Rio Grande (now the D. & R. G. W.) as general freight agent. In 1907 he was advanced to freight traffic manager, holding this position until federal control, during which period he served with the United States Railroad Administration at Denver. In 1920 he returned to the D. & R. G. as freight traffic manager and in the following year he was elected vice-president. In 1924 Mr. Wild was appointed a special traffic representative at Denver, holding this position until his retirement several years ago.

**Charles S. Churchill**, who, in 1926, retired as vice-president of the Norfolk & Western, in charge of purchases, real estate and valuation, died on January 25. Mr. Churchill was born on September 22, 1856, at New Britain, Conn., and was educated in civil engineering at Sheffield Scientific School, Yale University. He first entered railway service in 1879 and was engaged in the location of projected railroads in Connecticut for a year, then becoming engaged on the construction of the Meadville & Louisville (now part of the Bessemer & Lake Erie). From July,

1881, to January, 1884, Mr. Churchill was engaged on the location and construction of the Pittsburgh, McKeesport & Youghiogheny (now part of the Pittsburgh & Lake Erie) and during the following three years he was principal assistant engineer of construction on a branch of the Pennsylvania, then becoming engineer maintenance of way of the Shenandoah Valley (now part of the N. & W.). On October 1, 1888, following a brief period of service in the construction department of the N. & W., Mr. Churchill was advanced to engineer maintenance of way of that road, which position he held until 1903 when he was made chief engineer. In 1914, he was made assistant to the president in charge of federal valuation, then being appointed corporate vice-president in 1918. From March 1, 1920, until his retirement in 1926, Mr. Churchill served as vice-president in charge of purchases, real estate and valuation. Mr. Churchill was a past-president of the American Railway Engineering Association and was active in the affairs of many other technical and railroad organizations.

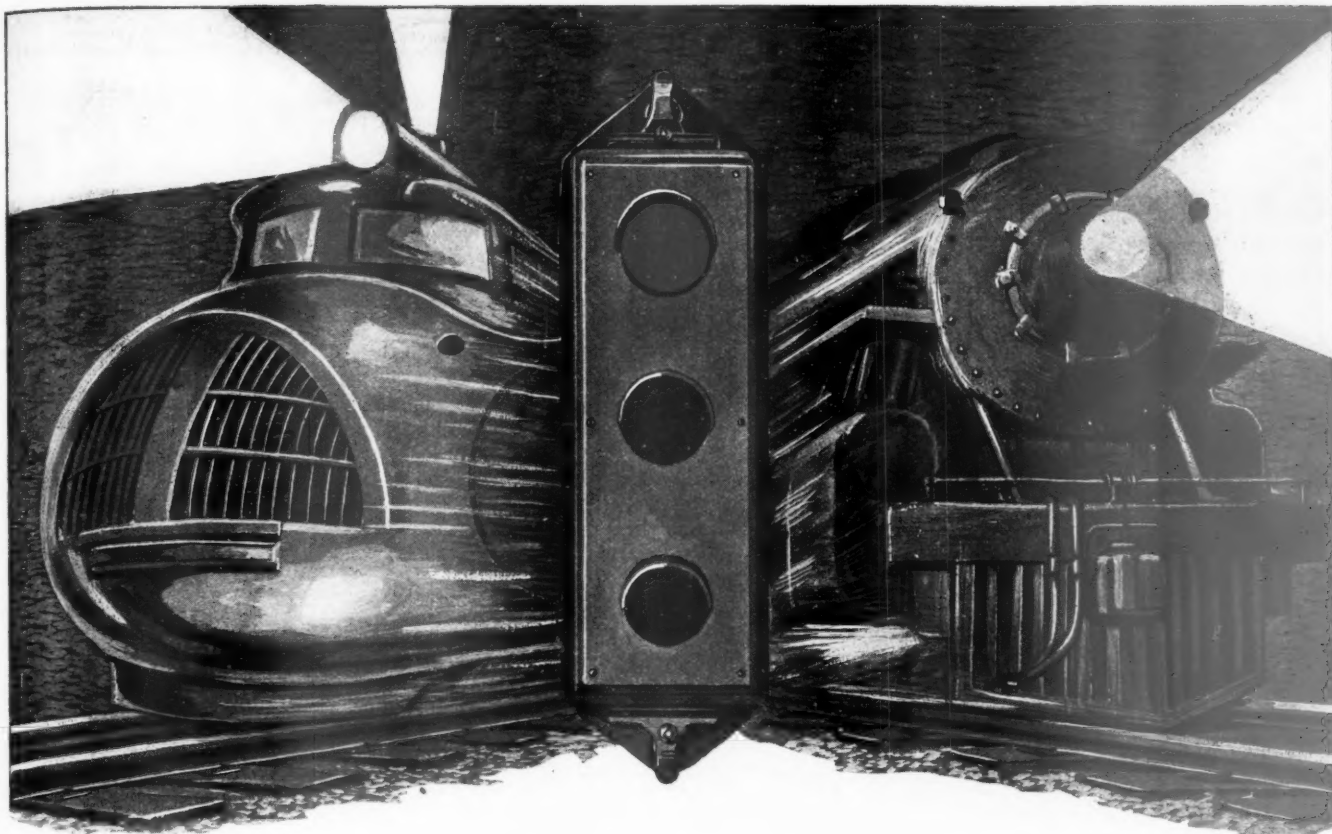
**William Davidson**, general storekeeper of the Illinois Central, with headquarters at Chicago, died suddenly of a heart attack on February 22. Mr. Davidson had been connected with the Illinois Central for 41 years. He was born on March 16, 1874, at Selma, Ala., and after a public school and business college education he worked for two years for the United Gas & Improvement Company at Vicksburg, Miss. In 1893 he entered railway service as a car



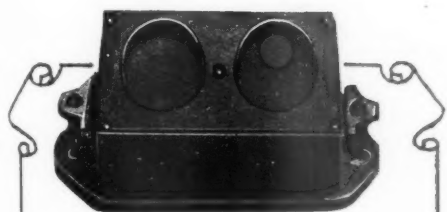
William Davidson

repairer on the Illinois Central at Vicksburg and later served successively as master car builder clerk, wheel clerk, storekeeper, file clerk, assistant timekeeper, general timekeeper, accountant, storekeeper and assistant chief clerk to the master mechanic. On June 1, 1908, Mr. Davidson was advanced to division storekeeper at Vicksburg, and on May 1, 1910, he was further promoted to assistant general storekeeper at Chicago. He was made general storekeeper of the Illinois Central System at Chicago on May 1, 1917, which position he held until his death. Mr. Davidson had been active in the affairs of the Purchases and Stores Division, American Railway Association, for many years and served as chairman of that division in 1929.

Table of Operating Statistics of Railways begins on next left-hand page



# Increased Safety of Train Operation -



## 10 GOOD REASONS—

—Why "Union" Coded Continuous Cab Signals are effective in improving railway service:

1. Increase safety of train operation.
2. Expedite traffic.
3. Signal indications are continuously visible irrespective of fog, other weather conditions, curves or physical obstructions.
4. Indicate instantly any changed condition on track ahead.
5. Permit trains to increase speed at any point where a less restrictive indication is received.
6. Determine location of broken rails.
7. Supplemented by audible indication.
8. Cab Signal duplicated on fireman's side.
9. Prevent misreading of wayside signals.
10. Effect operating economies.

... resulting from installation of "Union" Coded Continuous Cab Signals is because of several factors:

1. Cab signal indications cannot be hidden by fog or storms.
2. They are not misinterpreted by enginemen.
3. They prevent misreading of wayside signals.
4. They give the enginemen information of track conditions ahead, regardless of train position in the block.
5. They determine the location of broken rails.

Increased safety of operation is but one of the many good reasons why you should install "Union" Coded Continuous Cab Signals. Shall we tell you about the others? Consult our nearest district office.

1881

## Union Switch & Signal Co.

SWISSVALE, PA.

1934

NEW YORK

MONTREAL

CHICAGO

ST. LOUIS

SAN FRANCISCO



## Operating Statistics of Large Steam Railways—Selected Items for the Month of December, 1933,

Region, road and year	Average miles of road operated	Locomotive-miles		Car-miles		Ton-miles (thousands)		Average number of locomotives on line				
		Train-miles	Principal and helper	Light	Loaded (thousands)	Per cent loaded	Gross Excluding locomotives and tenders	Net Revenue and non-revenue	Service-able	Un-serv-iceable	Per cent un-serv-iceable	Stored
<b>New England Region:</b>												
Boston & Albany.....1933	402	128,995	133,601	8,831	2,881	68.1	150,257	50,393	66	38	36.3	17
.....1932	402	120,109	124,177	7,637	2,841	65.8	150,395	49,365	64	48	42.5	12
Boston & Maine.....1933	2,059	254,679	287,369	26,334	7,833	67.1	434,867	160,929	130	156	54.5	14
.....1932	2,058	245,680	277,466	24,386	7,698	65.1	428,270	153,519	135	154	53.4	31
N. Y., New H. & Hartf.....1933	2,044	321,258	391,232	19,360	9,568	65.2	525,157	195,250	199	160	44.6	19
.....1932	2,045	324,257	390,321	21,209	9,473	64.0	525,055	194,745	213	140	39.7	17
<b>Great Lakes Region:</b>												
Delaware & Hudson.....1933	848	208,904	278,409	31,503	6,414	59.7	415,445	188,602	246	31	11.2	140
.....1932	848	207,428	275,204	30,082	6,177	57.9	404,801	181,590	253	25	8.9	154
Del., Lack. & Western.....1933	998	343,111	381,154	48,965	9,892	64.7	593,415	237,830	193	65	25.1	41
.....1932	998	323,898	357,923	46,312	9,508	62.8	562,376	217,493	206	61	22.9	57
Erie (incl. Chi. & Erie).....1933	2,315	602,152	629,174	45,862	23,771	63.2	1,470,189	564,848	324	169	34.3	95
.....1932	2,316	601,004	624,603	48,707	22,869	60.0	1,468,875	565,946	305	182	37.3	95
Grand Trunk Western.....1933	1,008	197,096	198,505	2,590	4,470	58.3	278,786	93,036	68	80	54.0	2
.....1932	1,023	179,943	182,415	2,414	4,227	59.7	256,782	87,244	88	65	42.5	24
Lehigh Valley.....1933	1,335	370,486	387,574	38,541	10,289	62.9	643,738	264,462	171	146	46.1	11
.....1932	1,343	359,864	376,812	32,302	10,228	62.7	632,025	255,197	182	138	43.2	21
Michigan Central.....1933	1,957	329,890	331,238	13,158	9,674	61.2	576,101	200,951	135	53	28.3	38
.....1932	2,039	346,647	347,061	9,616	9,747	58.8	587,674	196,853	123	79	39.3	32
New York Central.....1933	6,411	1,389,720	1,484,908	107,756	47,298	58.7	3,081,617	1,267,385	566	576	50.4	23
.....1932	6,388	1,421,607	1,513,700	98,937	46,911	57.8	3,064,899	1,244,112	582	639	52.3	25
New York, Chi. & St. L.....1933	1,660	455,881	463,105	4,718	13,100	60.2	797,329	285,996	131	60	31.5	25
.....1932	1,661	431,603	440,398	4,500	11,849	59.8	709,226	245,571	125	115	48.0	27
Pere Marquette.....1933	2,218	309,557	316,884	2,805	6,630	58.5	437,475	168,030	117	56	32.3	22
.....1932	2,286	317,197	324,930	4,673	6,597	56.9	446,644	173,224	126	48	27.8	18
Pittsburgh & Lake Erie.....1933	229	62,967	65,282	1,095	2,401	56.3	200,870	108,309	30	40	57.1	4
.....1932	236	51,419	52,597	2,236	1,979	57.4	166,604	92,094	29	56	65.7	6
Wabash.....1933	2,445	498,416	506,405	9,908	13,912	61.2	829,822	270,071	168	171	50.4	71
.....1932	2,461	483,219	495,932	9,932	13,164	62.7	751,367	254,341	180	182	50.2	28
<b>Central Eastern Region:</b>												
Baltimore & Ohio.....1933	6,263	1,201,711	1,464,785	158,915	32,564	58.1	2,283,384	998,066	716	618	46.3	98
.....1932	6,283	1,228,278	1,445,982	138,559	31,091	58.1	2,156,432	936,628	806	561	41.0	226
Big Four Lines.....1933	2,655	548,118	569,368	23,892	15,054	60.3	976,237	428,398	201	160	44.3	25
.....1932	2,664	577,501	599,784	17,325	15,013	59.4	1,020,400	468,689	256	175	40.6	11
Central of New Jersey.....1933	690	137,231	150,730	24,913	4,204	56.6	302,131	143,978	101	71	41.0	39
.....1932	692	145,513	158,922	24,893	4,322	54.6	316,998	150,201	117	61	34.5	58
Chicago & Eastern Illinois.....1933	939	172,292	173,349	2,938	3,496	59.1	244,274	106,326	63	109	63.4	15
.....1932	939	182,836	183,182	3,567	3,357	58.4	240,950	107,980	68	96	58.8	23
Elgin, Joliet & Eastern.....1933	446	77,949	78,589	1,162	1,610	59.4	127,565	63,962	66	23	25.4	16
.....1932	447	66,118	67,268	1,393	1,351	55.2	112,099	53,980	76	13	14.9	33
Long Island.....1933	396	28,167	28,749	13,060	266	52.8	20,332	8,118	34	21	38.5	..
.....1932	396	32,507	33,567	13,164	310	51.6	24,166	9,600	34	13	27.1	7
Pennsylvania System.....1933	10,082	2,431,468	2,726,887	292,945	79,319	60.9	5,345,548	2,331,183	1,538	906	37.1	413
.....1932	10,528	2,461,071	2,767,327	281,414	76,239	59.7	5,195,806	2,268,492	1,831	678	27.0	766
Reading.....1933	1,454	381,461	416,788	46,181	9,979	57.9	747,283	359,419	257	111	30.2	86
.....1932	1,454	404,711	433,958	44,724	10,079	56.4	772,265	370,314	294	92	23.9	115
<b>Pocahontas Region:</b>												
Chesapeake & Ohio.....1933	3,112	723,125	760,317	30,193	27,900	55.4	2,369,624	1,270,380	459	209	31.3	160
.....1932	3,136	776,632	817,267	27,703	30,289	53.8	2,623,783	1,414,220	518	155	23.0	210
Norfolk & Western.....1933	2,163	510,505	530,103	23,535	17,410	60.5	1,435,574	762,708	409	56	12.1	195
.....1932	2,223	551,800	573,367	25,967	18,637	58.9	1,547,347	827,853	415	59	12.5	183
<b>Southern Region:</b>												
Atlantic Coast Line.....1933	5,145	547,034	547,805	6,093	10,367	59.8	574,453	194,759	353	129	26.7	107
.....1932	5,144	535,027	536,115	7,576	10,195	58.6	559,499	177,539	370	99	21.2	124
Central of Georgia.....1933	1,904	189,477	190,309	3,534	3,743	66.4	206,770	75,119	103	38	27.1	..
.....1932	1,900	181,460	182,188	2,419	3,369	66.0	184,851	66,437	92	51	36.0	2
Ill. Cent. (incl. Y. & M. V.).....1933	6,640	1,236,644	1,251,474	22,451	26,372	57.9	1,808,138	733,623	595	339	36.3	10
.....1932	6,658	1,295,660	1,307,397	23,815	27,315	57.6	1,925,715	805,197	660	284	30.0	22
Louisville & Nashville.....1933	5,102	862,169	919,698	23,538	17,481	58.9	1,223,394	575,677	344	296	46.2	36
.....1932	5,166	907,975	968,568	28,085	17,555	56.4	1,272,390	597,254	365	346	48.6	88
Seaboard Air Line.....1933	4,298	447,843	455,213	3,639	10,171	63.5	599,072	214,340	218	73	25.1	12
.....1932	4,376	448,459	464,364	4,416	9,844	60.6	589,506	196,943	246	44	15.2	39
Southern.....1933	6,602	1,012,592	1,025,427	16,677	21,080	63.9	1,199,606	451,293	665	253	27.6	167
.....1932	6,612	1,026,730	1,037,422	17,106	21,093	63.1	1,202,301	444,234	750	209	21.8	250
<b>Northwestern Region:</b>												
Chicago & North Western.....1933	8,443	863,629	896,831	19,433	19,475	60.9	1,206,345	438,194	578	239	29.3	162
.....1932	8,443	831,193	875,865	20,373	18,575	61.7	1,134,643	371,502	610	218	26.3	223
Chicago Great Western.....1933	1,463	202,249	203,749	14,532	5,672	56.6	366,111	123,030	66	33	33.7	3
.....1932	1,463	202,491	202,952	14,837	5,511	58.6	346,815	123,118	64	40	38.2	4
Chi., Milw., St. P. & Pac.....1933	11,195	1,040,530	1,092,032	47,434	24,196	60.3	1,540,707	613,492	566	314	35.7	228
.....1932	11,234	1,069,186	1,131,877	50,947	24,151	59.7	1,555,377	619,278	750	160	17.6	380
Chi., St. P., Minneap. & Om.....1933	1,633	196,577	201,399	9,350	3,759	65.7	230,825	91,802	123	33	21.3	61
.....1932	1,714	200,820	206,906	8,661	3,585	64.5	217,101	85,904	145	25	14.6	81
Great Northern.....1933	8,333	586,046	590,841	18,812	15,274	67.4	940,909	401,382	437	166	27.6	115
.....1932	8,430	563,318	566,407	14,423	13,445	66.9	801,516	336,185	484	120	19.8	167
Minneap., St. P. & S. St. M.....1933	4,281	316,160	319,768	2,139	5,800	65.2	335,202	137,108	123	41	25.2	12
.....1932	4,314	332,757	334,861	1,019	5,523	65.8	308,473	125,000	138	46	24.9	14
Northern Pacific.....1933	6,414	490,699	529,996	35,078	13,288	67.7	794,321	343,205	365	153	29.6	32
.....1932	6,397	454,196	476,329	26,585	11,329	66.7	670,754	279,243	390	140	26.3	101
Oreg.-Wash. R. R. & Nav.....1933	2,130	139,465	144,259	9,580	3,351	66.9	200,614	82,963	74	47	38.7	15
.....1932	2,182	135,570	139,405	6,237	2,788	68.3	159,471	63,469	85	38	30.7	35
<b>Central Western Region:</b>												
Alton.....1933	923	168,567	171,411	897	3,010	59.4	195,276	69,600	36	55	60.0	1
.....1932	952	174,896	175,403	1,003	3,105	55.3	212,073	73,855	59	43	41.9	11
Atch., Top. & S. Fe. (incl. P. & S. F.).....1933	11,509	1,217,151	1,271,981	48,304	29,335	61.5	1,809,522	596,301	624	297	32.3	206
.....193												

## Compared with December, 1932, for Roads with Annual Operating Revenues Above \$25,000,000

Region, road and year	Average number of freight cars on line			Per cent un-servic-able	Gross ton-miles per train-hour, ex-cluding locomotives and tenders	Gross ton-miles per train-mile, ex-cluding locomotives and tenders	Net ton-miles per train-mile	Net ton-miles per loaded car-mile	Net ton-miles per car-day	Car-miles per car-day	Net ton-miles per mile of road per day	Pounds of coal per 1,000 gross ton-miles, including locomotives and tenders	Loco-motive-miles per locomotive-day
	Home	Foreign	Total										
<b>New England Region:</b>													
Boston & Albany.....	1933	3,440	3,381	6,821	27.7	19,714	1,165	391	17.5	238	20.0	4,046	181
	1932	4,624	2,524	7,148	37.7	20,479	1,252	411	17.4	223	19.5	3,964	176
Boston & Maine.....	1933	10,465	7,071	17,536	22.8	23,978	1,708	632	20.5	296	21.5	2,522	125
	1932	11,100	6,340	17,440	21.7	23,508	1,726	618	19.9	281	21.6	2,379	116
N. Y., New H. & Hartf.....	1933	15,976	10,217	26,193	11.4	23,584	1,635	608	20.4	240	18.1	3,081	126
	1932	16,985	9,836	26,821	8.5	24,354	1,619	601	20.6	234	17.8	3,072	126
<b>Great Lakes Region:</b>													
Delaware & Hudson.....	1933	11,330	2,522	13,852	3.6	25,125	1,989	903	29.4	439	25.0	7,172	129
	1932	11,200	2,224	13,424	4.5	25,672	1,952	875	29.4	436	25.6	6,907	127
Del., Lack. & Western.....	1933	17,451	4,480	21,931	12.2	25,060	1,730	693	24.0	350	22.5	7,686	169
	1932	18,766	3,685	22,451	10.2	24,569	1,736	671	22.9	312	21.6	7,029	163
Erie (incl. Chi. & Erie).....	1933	32,985	11,785	44,770	5.2	37,989	2,442	938	23.8	407	27.3	7,870	111
	1932	36,274	10,608	46,882	5.7	37,309	2,444	942	24.7	389	26.2	7,883	113
Grand Trunk Western.....	1933	6,231	7,306	13,537	19.9	27,180	1,414	472	20.8	222	18.3	2,976	108
	1932	5,533	7,762	13,295	15.6	23,344	1,427	485	20.6	212	17.2	2,751	120
Lehigh Valley.....	1933	18,101	5,782	23,883	19.7	30,326	1,738	714	25.7	357	22.1	6,391	152
	1932	19,503	4,617	24,120	19.4	29,084	1,756	709	25.0	341	21.8	6,129	155
Michigan Central.....	1933	21,516	17,682	39,198	13.8	32,345	1,746	609	20.8	165	13.0	3,312	126
	1932	24,883	17,215	42,098	10.0	30,063	1,695	568	20.2	151	12.7	3,114	128
New York Central.....	1933	66,026	56,820	122,846	24.4	34,899	2,217	912	26.8	333	21.2	6,377	112
	1932	83,936	54,199	138,135	23.3	33,283	2,156	875	26.5	291	19.0	6,283	113
New York, Chi. & St. L.....	1933	9,299	6,277	15,576	4.8	30,665	1,749	627	21.8	592	45.0	5,557	172
	1932	16,025	5,755	21,780	15.4	28,731	1,643	569	20.7	364	29.3	4,770	113
Pere Marquette.....	1933	13,784	4,706	18,490	2.8	24,238	1,413	543	25.3	293	19.8	2,444	105
	1932	13,881	4,706	18,587	2.7	24,387	1,408	546	26.3	301	20.1	2,444	106
Pittsburgh & Lake Erie.....	1933	15,480	10,462	25,942	30.0	43,282	3,190	1,720	45.1	135	5.3	15,235	118
	1932	17,505	6,260	23,765	25.3	47,385	3,240	1,791	46.5	125	4.7	12,613	122
Wabash.....	1933	15,547	8,086	23,633	3.1	33,974	1,665	542	19.4	369	31.0	3,563	127
	1932	19,943	7,083	27,026	9.7	31,176	1,555	526	19.3	304	25.1	3,333	133
<b>Central Eastern Region:</b>													
Baltimore & Ohio.....	1933	84,250	16,832	101,082	20.2	24,469	1,900	831	30.7	319	17.9	5,141	169
	1932	97,325	14,672	111,997	13.7	23,125	1,756	763	30.1	270	15.4	4,809	164
Big Four Lines.....	1933	18,173	21,977	40,150	15.3	31,131	1,781	782	28.5	344	20.1	5,206	126
	1932	21,555	18,144	39,699	17.4	30,155	1,767	810	31.2	381	20.5	5,676	128
Central of New Jersey.....	1933	16,691	6,653	23,344	34.7	26,429	2,202	1,049	34.2	199	10.3	6,732	150
	1932	17,949	6,193	24,142	20.5	28,494	2,178	1,032	34.8	201	10.6	7,002	139
Chicago & Eastern Illinois.....	1933	5,848	2,408	8,256	22.5	25,074	1,418	617	30.4	415	23.1	3,653	133
	1932	6,065	2,048	8,113	17.8	22,216	1,318	591	32.2	429	22.9	3,710	148
Elgin, Joliet & Eastern.....	1933	9,502	3,821	13,323	19.0	14,629	1,637	821	39.7	155	6.6	4,626	139
	1932	9,977	4,171	14,148	10.5	14,895	1,695	816	40.0	123	5.6	3,895	143
Long Island.....	1933	781	3,067	3,848	2.1	5,543	722	288	30.5	68	4.2	661	316
	1932	803	3,157	3,960	1.2	5,535	743	295	31.0	78	4.9	782	324
Pennsylvania System.....	1933	243,866	44,612	288,478	12.2	31,230	1,959	959	29.4	261	14.6	7,459	140
	1932	249,919	44,190	294,109	8.9	29,601	2,111	922	29.8	249	14.0	6,951	143
Reading.....	1933	37,002	8,141	45,143	18.9	24,152	1,959	942	36.0	257	12.3	7,977	163
	1932	39,276	7,412	46,688	14.5	23,098	1,908	915	36.7	256	12.4	8,218	164
<b>Poconos Region:</b>													
Chesapeake & Ohio.....	1933	45,813	7,655	53,468	1.7	45,350	3,277	1,757	45.5	766	30.4	13,169	89
	1932	45,058	6,688	51,746	1.6	46,596	3,378	1,821	46.7	882	35.1	14,549	90
Norfolk & Western.....	1933	41,122	3,586	44,708	3.4	42,862	2,812	1,494	43.8	550	20.8	11,376	122
	1932	40,445	4,028	44,473	3.1	41,165	2,804	1,500	44.4	600	23.0	12,011	125
<b>Southern Region:</b>													
Atlantic Coast Line.....	1933	27,400	5,562	32,962	25.5	18,552	1,050	356	18.8	191	17.0	1,221	128
	1932	29,301	5,626	34,927	14.5	18,814	1,046	332	17.4	164	16.1	1,113	123
Central of Georgia.....	1933	7,608	1,895	9,503	26.0	19,968	1,091	396	20.1	255	19.1	1,273	135
	1932	6,869	1,550	8,419	27.2	18,180	1,019	366	19.7	255	19.5	1,128	142
Ill. Cent. (incl. Y. & M. V.).....	1933	53,326	12,375	65,701	37.6	24,452	1,462	593	27.8	360	22.3	3,564	151
	1932	54,203	11,805	66,008	23.4	23,589	1,486	621	29.5	393	23.2	3,901	157
Louisville & Nashville.....	1933	49,563	6,149	55,712	27.5	22,036	1,419	668	32.9	333	17.2	3,640	151
	1932	52,872	5,010	57,882	23.8	20,936	1,401	658	34.0	333	17.3	3,730	158
Seaboard Air Line.....	1933	13,123	4,383	17,506	9.3	22,210	1,338	479	21.1	395	29.5	1,609	126
	1932	15,328	4,202	19,530	12.1	21,424	1,315	439	20.0	325	26.8	1,452	130
Southern.....	1933	32,358	17,956	50,314	23.8	19,947	1,185	446	21.4	289	21.1	2,205	162
	1932	41,882	21,824	63,706	15.3	19,200	1,171	433	21.1	225	16.9	2,167	163
<b>Northwestern Region:</b>													
Chicago & North Western.....	1933	44,482	17,384	61,866	9.8	22,121	1,397	507	22.5	228	16.7	1,674	144
	1932	46,969	18,316	65,285	8.4	20,572	1,365	447	20.0	184	14.9	1,419	144
Chicago Great Western.....	1933	3,337	2,840	6,177	6.1	32,888	1,810	608	21.7	643	52.4	2,712	151
	1932	4,699	2,685	7,384	13.1	29,501	1,713	608	22.3	538	41.1	2,714	157
Chi., Milw., St. P. & Pac.....	1933	59,405	13,430	72,835	4.2	23,399	1,481	590	25.4	272	17.8	1,768	137
	1932	62,372	13,362	75,734	3.3	22,397	1,455	579	25.6	264	17.2	1,778	143
Chi., St. P., Minneap. & Om.....	1933	2,330	6,922	9,252	11.3	18,077	1,174	467	24.4	320	19.9	1,792	132
	1932	2,261	7,038	9,299	9.3	16,000	1,081	428	24.0	298	19.3	1,617	138
Great Northern.....	1933	43,601	9,881	53,482	6.0	23,837	1,606	685	26.3	242	13.7	1,554	150
	1932	44,498	8,901	53,399	4.4	21,923	1,423	597	25.0	203	12.1	1,286	154
Minneap., St. P. & S. St. M.....	1933	16,698	2,958	19,656	5.3	17,213	1,060	434	23.6	225	14.6	1,033	130
	1932	20,714	2,271	22,985	3.6	15,175	927	376	22.6	177	11.9	935	136
Northern Pacific.....	1933	41,733	4,290	46,023	11.5	23,783	1,619	699	25.8	241	13.8	1,726	165
	1932	43,751	3,894	47,645	9.6	22,163	1,477	615	24.6	189	11.5	1,408	174
Oreg.-Wash. R. R. & Nav.....	1933	8,064	1,767	9,831	9.2	21,504	1,438	595	24.8	272	16.4	1,256	153
	1932	9,041	1,748	10,789	6.7	20,032	1,176	468	22.8	190	12.2	938	171
<b>Central Western Region:</b>													
Alton.....	1933	3,169	5,333	8,502	22.0	24,694	1,158	413	23.1	264	19.2	2,434	139
	1932	5,085	4,095	9,180	14.3	24,469	1,213	422	23.8	260	19.7	2,504	144
Atch., Ton. & S. Fe. (incl. P. & S. F.).....	1933	66,441	7,891	74,332	13.1	28,146	1,487	490	20.3	259	20.7	1,671	122
	1932	68,649	7,972	76,621	10.1	27,188	1,450	459	19.5	240	20.4	1,587	126
Chi., Burl. & Quincy.....	1933	40,368	11,858	52,226	8.4	25,4							



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